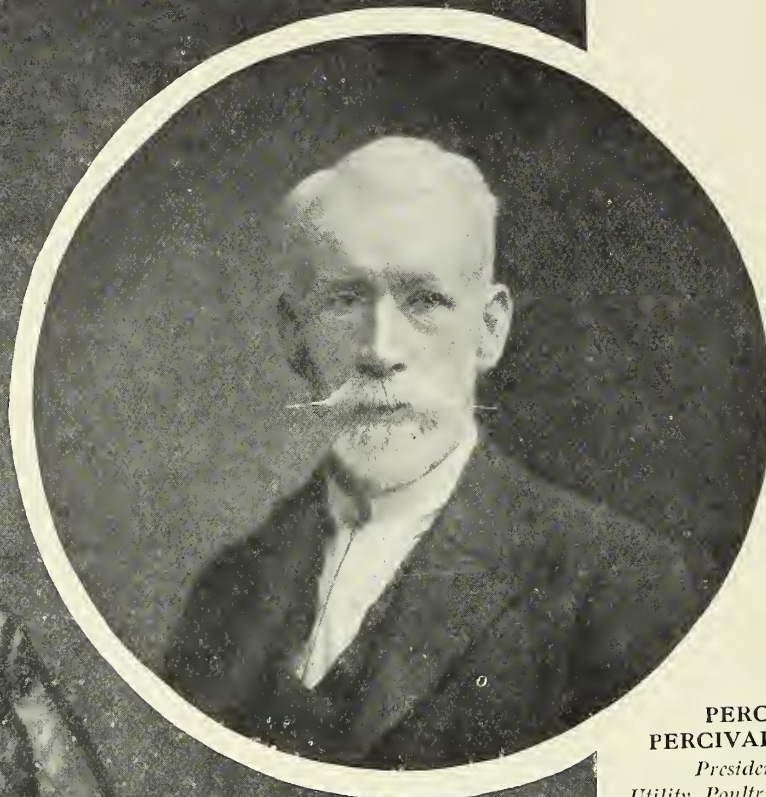
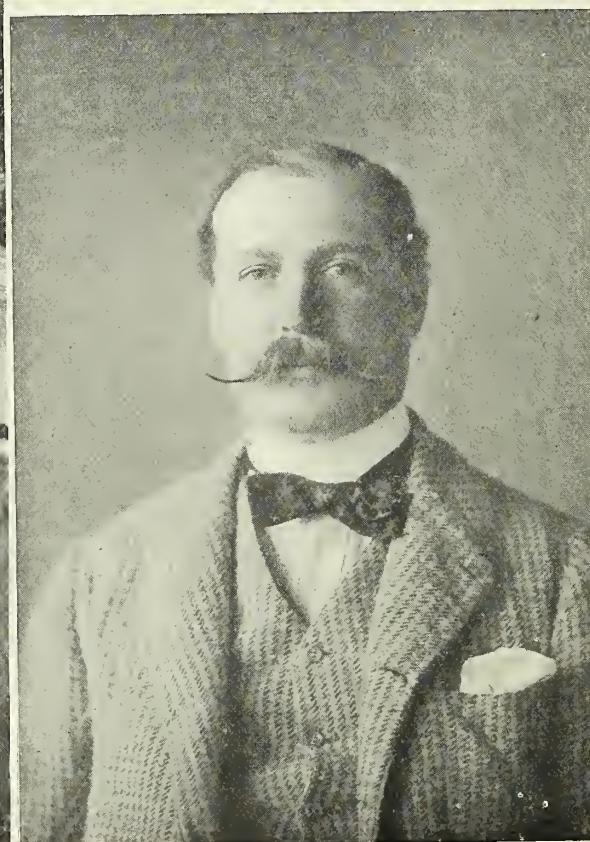


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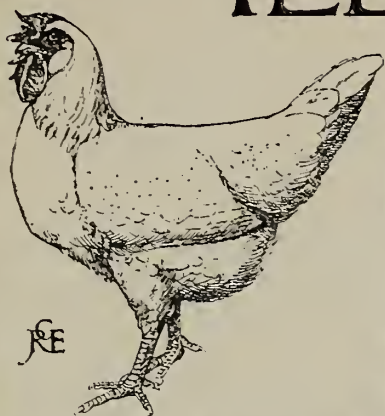
PERCY
PERCIVAL, Esq.-
*President,
Utility Poultry Club.*



THE MARCHIONESS OF SALISBURY.
President, National Poultry Organisation Society.

COLONEL SANDBACH.
President, Poultry Club.

THE ILLUSTRATED POULTRY RECORD



Vol. 1.—No. 1.

October 1, 1908.

Monthly Sixpence Net.

OF this our venture in poultry journalism we beg to offer a few words of explanation. That something of the kind was needed has been recognised by many ; we shall endeavour our utmost to provide for that need. It would be idle to affirm that the Poultry Industry, one of our great national industries, is sufficiently well catered for when only four penny weekly papers devoted to its interests are published in this country. We need, therefore, offer no apologies for adding to the number of poultry journals, since that number is only too small, and we can spare ourselves any laboured explanation of the points whereon we propose to differ from our excellent, but few contemporaries.

We may, however, briefly summarise the character and aims of THE ILLUSTRATED POULTRY RECORD. It is the first sixpenny monthly journal connected with the industry to be published in this country, and its first aim is to help that industry along its upward path. The means by which we hope to achieve this end is a journal written by experts, embodying the best and latest knowledge and experience gained at home and abroad, and accompanied by illustrations that are high class as well as interesting and instructive. We intend to deal comprehensively with the various ramifications of the industry as it exists to-day, giving every phase of thought and opinion an opportunity for expression, without fear or favour.

Much careful thought has been given to the planning of this journal. The selection of Sectional Editors, Correspondents, and Contributors has been made with a view to combining the most reliable practical knowledge with literary expression. THE ILLUSTRATED POULTRY RECORD will be National, in that as its home is in the United Kingdom its interests must be most closely identified with the British Isles. It will be Imperial, in that Poultry Breeding throughout the British Empire will always occupy a prominent place. It will be International, in that it will afford a medium for the interchange of information and ideas between poultry keepers throughout the civilised world.

It will be our endeavour to help, to instruct, to please everyone interested in poultry—the practical farmer, large and small, the specialist breeder and poultry keeper, the scientific student, the amateur who keeps a few birds, the trader and the consumer, and to defend their interests. We shall seek to avoid stodginess without degenerating into flippancy, to provide information that is none the less practical because it is brightly expressed, and to record every movement that is of more than ephemeral interest to the poultry world. In so doing we invite the co-operation of our readers, asking them to contribute their knowledge to the general store. It is our hope to produce a magazine of information, one that every poultry keeper will desire to buy and study.

We have said that our primary aim is to advance the development of the industry. We are, however, constrained to remind our readers that the measure of our success in this direction is dependent upon the support they give us ; in other words, that though this commercial undertaking aims at something higher than mere pecuniary gain, it is still a commercial undertaking. To ensure a fair start for the new ship much money has been spent, and we are prepared to spend much more to secure its safe passage between the rocks and shoals of the troubled sea of journalism ; but how much we spend must depend very largely on the support accorded to us. We feel that it would be more than foolish and less than fair to omit this confession from our apologia.

THE EDITOR.

DIARY OF THE MONTH.

EDITORIAL NOTICE.

The Editor will be glad to consider any MSS., photographs, or sketches submitted to him, but they should be accompanied with stamped addressed envelopes for return if unsuitable. In case of loss or injury he cannot hold himself responsible for MSS., photographs, or sketches, and publication in *THE ILLUSTRATED POULTRY RECORD* can alone be taken as evidence of acceptance. The name and address of the owner should be placed on the back of all pictures and MSS.

The Annual Subscription to *THE ILLUSTRATED POULTRY RECORD* at home and abroad is 8s. including postage, except to Canada, in which case it is 7s.

The Editor will be glad to hear from readers on any Poultry Topics and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in any difficulty regarding the management of their poultry and accordingly no charge for answering such queries is made.

Preserved Eggs.

Several letters have appeared in *The Times* on the question of the sale of preserved eggs, in which statements are again made which demand the careful consideration of poultry keepers. The discussion was opened by a letter from Messrs. Welford and Sons, the well-known London dairymen, in which they complained as to the mixing of preserved eggs with fresh, which practice was confirmed by other traders. They advocated that all preserved eggs should by law be stamped with a distinctive mark and that it should be a penal offence to sell without such indication. Whether the plan suggested could be carried out, or would be a remedy, need not trouble us at the present time, but, as was pointed out in our contemporary by the secretary of the National Poultry Organisation Society, there is small risk of preserved eggs being sold to traders as "new-laid," for they offer evidence of what they really are, and as there is a growing and profitable demand for these in the autumn, it is a part of the business which should be encouraged. The chief danger is with "kept" eggs retained for a few weeks and sold when they are inferior to even the preserved goods. It is to the interest, apart from common honesty, of producers to maintain the standard of their goods, which can only be by selling their eggs for what they are and not attempting to palm them off for something different.

The White Leghorn Controversy.

The divergent views of breeders of white Leghorns have again found expression by means of

letters in the weekly press. Consequently the article which we publish this month and the illustrations which accompany it are of special interest. Without expressing any opinion at the present time on the comparative merits of the two types, we desire to call special attention to a point which does not appear to have received attention. Where is the limit of change in a breed, and when does the time arrive that the produce of such changes should require a new name? That changes will and must take place with new conditions and environment has been abundantly proved, and so long as they are in keeping with the original characters and qualities no objection can be raised. But there is a point when the limit is passed, under which circumstances a new designation appears to be imperative. It is freely acknowledged that the birds now exhibited as white Leghorns differ in type, shape, length of leg, comb, tail, and size of body from the Italian fowl, as well as in the economic qualities, and the point to be decided is whether these have not gone beyond merely minor developments. We hope that the question will be thrashed out. One definite standard should be adopted, otherwise we shall have original and modern representatives of each breed, as in Game and Langshans, one for exhibition and the other for utility, which would be a serious state of things. The effect of these white Leghorn changes is that, except for a few show birds, buyers in the Colonies and foreign countries are purchasing their stock from America, and British breeders have lost a very profitable trade both at home and abroad. It appears to be a fact that in the Australian laying competitions

the winners were of American not English descent. This should be recognised by those taking part in the controversy.

Scotland and the Poultry Industry.

The Departmental Committee on poultry breeding in the Highlands and Islands of Scotland, which was appointed by the Right Honourable John Sinclair, Secretary of State for Scotland, towards the end of June last, recommenced its labours, after an enforced rest of some weeks, owing to the indisposition of the chairman, on Friday, September 11. The personnel of the committee is a strong one, the members being well known in the Scottish agricultural world. Under the chairmanship of Mr. James Murray, M.P., the party, consisting of Professor Patrick Wright (Glasgow), Mr. Harry Hope (Dunbar), Mr. S. McCall Smith (Crieff), Mr. Alex. M. Prain (Inchture), and Mr. W. Brown (Theale, Reading) as secretary, visited Shetland, Orkney, Lewis, Skye and Caithness during July, collecting evidence from a large number of squatters, cottars, crofters, farmers and egg merchants. The present tour commenced on September 11, and, after visiting the islands of Tiree and Skye, the party proceeded to the mainland, and before the conclusion of the trip the following counties will be traversed:—Ross and Cromarty, Sutherlandshire, Morayshire, Inverness-shire, Banffshire, Aberdeenshire, Kincardineshire and Forfarshire. It will be seen that the inquiry is a full one, and it is confidently expected that the report of the committee, containing suggestions for the improvement of the poultry industry in the North of Scotland, will be a valuable aid to those whose duty it is to assist the rural population in the congested districts of the Highlands and Islands.

Irish Poultry Statistics.

In connection with the article published in this issue, entitled "What the Poultry Industry is Doing for Ireland," to which we call special attention, as it embodies important and startling official information as to the enormous growth of egg and poultry exports from the Green Isle, we are able to give the census of poultry for the current year, just issued by the Irish Department of Agriculture. The total number of poultry is 24,326,995, divided as follows: turkeys, 1,209,625; geese, 1,895,223; ducks, 3,454,312; fowls, 17,767,835. As compared with 1907 there is a total decrease of 296,896. Ducks show an increase of 22,831, while turkeys have decreased by 158,179, geese by 56,754, and fowls by 104,794. It is suggested that the falling-off in numbers is probably accounted for by the unfavourable hatching season this year. The total given is made up by 13,662,764 adult poultry and 10,367,335 stock hatched in 1908.

A Permanent Exhibition.

The proposal to establish a permanent economic exhibition of poultry at Moritzburg is significant of continental progress in production and is reminiscent of the suggestion made some two or three years ago to found what was termed a "Poultry Zoo" in this country. There is, however, one noteworthy difference between the two schemes. The object of the English proposal was to bring together in one place, for a period of twelve months, all the varieties recognised by exhibitional breeders; whereas the proposed exhibition in Saxony is to be permanent and is avowedly utilitarian in character. Useful breeds of domestic fowls, ducks, geese, turkeys, and pheasants are to be permanently on view amid suitable surroundings, and stock birds and settings of eggs are to be purchasable, at reasonable rates, by those who desire reliable stock for the production of table poultry and eggs—the primary object being to interest and encourage the practical farm producers and amateurs. The aims of such an exhibition are much more practicable than those of a "Zoo" containing the sixty odd breeds, and 150 or so varieties, in which English fanciers are more or less interested, and its development should be well worth the attention of the Utility Poultry Club. Such an object lesson should be as feasible in England as in Saxony, and certainly as useful. The present exhibitional types of so many breeds, as seen at the majority of our shows, are unsuitable for the purposes of market producers, and to that extent are misleading to those visitors who seek to improve their knowledge from an economical standpoint.

Grouse Diseases.

Although the investigations of the Grouse Disease Inquiry Committee are made chiefly on behalf of sport, their final report, when it comes to be published, may possess considerable interest for the poultry keeper. Entrusted in 1905 with the task of investigating *the* grouse disease—identified up to then with the epidemic and infectious form of enteritis described and discovered by Professor Klein, which is analogous to the similar acute disease of poultry known as Klein's Enteritis—the committee, after three years' work on the moors and in the laboratory, have found out what, after all, was only to be expected, namely, that grouse, like poultry, are afflicted with many more diseases than one, including nematode worms and other parasites giving rise to chronic ailments, while it is remarkable that no instance of epidemic enteritis had, up to the date of the publication of their interim report last July, been met with. Which means that it is unjustifiable to speak of any disease of grouse as *the* grouse disease.

But on the other hand the temporary disappearance of Klein's Enteritis for three seasons does not preclude its right to be still looked upon as the most destructive of the diseases hitherto found in game. From inquiries made into the circumstances of epidemics brought to our notice in six poultry yards during the past summer, it is our opinion that the microbe, in the case of fowls, is ingested in the first instance with manure recently turned up in pits or spread on land and by water polluted by the same agency.

"Owner's Risk" Rates.

In the recently issued report of the Board of Agriculture and Fisheries, relative to the work of the Commercial Control Branch of the Intelligence Division, reference is made to the difference in rates applied to the carriage of certain perishable produce at company's risk and owner's risk and as to whether such is excessive. This question was originally raised by an association of nurserymen and fruit growers, the subsequent inquiry also covering complaints of certain anomalies in rates for game and rabbits, which stated that the owner's risk rates exceeded in some circumstances the statutory maximum charge at company's risk. As further inquiries are in progress by the inspectors of the Board, for the purpose of ascertaining what action, if any, is desirable in the interest of agriculturists, it would appear to be a favourable opportunity for consigners of poultry and eggs to increase the volume of evidence and thus strengthen the hands of the Board in view of their possible intervention. Any question affecting the transport of perishable produce is of the utmost importance to poultry and egg producers, the aggregate of whose consignments is no unimportant item in the annual railway returns; but, unfortunately, owing to lack of adequate co-operation and representation, they are practically impotent, the few individual demands for more favourable rates and facilities absolutely failing to impress the companies. In such a case as the present, however, with an inquiry relative to kindred interests already in progress, individuals may do much by pressing their equal claims as poultry and egg producers and consigners.

American Poultry Association.

The annual meeting of the leading American society was held at Niagara Falls on August 10 to 12, and from the reports to hand must have been a most interesting gathering. At the present time the A.P.A. is passing through a period of crisis, as there are widely divergent views held as to its methods and scope of operations. The most active workers have been those interested in what are called "Standard-bred," that is, fancy poultry, due to the fact that they can afford to spend time and money more freely than those who are concerned in production for market, and they can hope to secure some return for their efforts. The practical side is not neglected altogether, but is not considered to the extent that its relative value deserves. Fortunately in America the agricultural colleges and experiment

stations keep primarily in view food production, and it is owing largely to their efforts that the poultry industry has made such rapid developments across the Atlantic. A most unfortunate event occurred in the compulsory retirement of the re-elected secretary, after one day's occupancy of his second term of office, owing to very doubtful financial methods and wilful disregard of the definite instructions given by the committee. Mr. F. J. Kimmey was elected to the vacant position.

The Maine Experiment Report.

A veritable bombshell has been exploded among the ranks of poultry breeders in America by the publication of Bulletin No. 157 of the Maine Agricultural Experiment Station. Since the year 1897 the poultry investigations at Orono, Maine, have done much to stimulate progressive poultry breeding, more especially in regard to the improvement of egg production by selection of the best layers as breeders, by which claim was made that it was possible to reach a 200-egg standard over a large flock by means of trap nesting. Since the retirement of the late Professor Gowell the annual records have been carefully investigated and Dr. R. Pearl and Dr. F. M. Surface, biologists of the station, have prepared a complete report—of which the bulletin referred to is a summary—which will shortly be published by the Bureau of Animal Industry at Washington, and will be awaited with painful interest by poultry breeders everywhere. Taking the entire nine years, it is stated that "the range of variation extends from zero to approximately 250 eggs in the records of the station. The amount of variation in regard to egg production is substantially the same at the end of the selection experiment as it was at the beginning. That is to say, after nine years of selection with respect to egg production the birds are no truer to a definite type of egg production than they were at the beginning." And, further, that "the trend of average annual egg production has been slightly downward throughout the course of the experiment," for in 1899-1900 the average was 136.36, rising to 155.58 in 1901-1902, and falling to 113.24 in 1906-1907.

We hope that the full report referred to above will not be long delayed, so that the question can be considered practically as well as scientifically, as it is of supreme importance to all who are concerned in the poultry industry. Whilst acknowledging the frankness with which the Maine Station has revealed the true facts of the case, we suggest that it is desirable to suspend judgment. If selection of the best layers and elimination of the drones is not the way to improve fecundity, what is it that has increased the average number of eggs produced in Britain, in America, and in Denmark? We, and all stock and plant breeders also, have believed that heredity is seen in economic qualities as well as external characters. If that is not so then all our theories of breeding will have to be revised and the experience of hundreds of years must appear to go for naught. Should any of our readers have definite experience in this direction, we hope they will communicate it, whether it is favourable or unfavourable to the view commonly held.

THE LEADING BRITISH POULTRY SOCIETIES.

THE POULTRY CLUB.

By G. TYRWHITT-DRAKE, Hon. Sec. and Treasurer.

THE Poultry Club was started in the year 1877, but I am unable to trace much about its history by old records till the year 1881, when it appears to have been in a flourishing condition, with a membership roll of 250, the Hon. and Rev. F. G. Dutton being president and the late Mr. A. Comyns hon. secretary, a position he held till the year 1892. The next ten years (1882 to 1892) seem to have been rather uneventful and not marked by any decided progress; in fact, the membership in 1892 had dropped to 152; more than 25 per cent. less than in 1881! During this year Mr. R. T. Thornton took the place of the late Mr. Alex. Comyns as hon. secretary, and the post of assistant hon. secretary, previously held by the late Mr. M. T. Broomhead for some few years, seems to have dropped out altogether. The year 1893 is marked by the first appointment of an hon. solicitor to the club, also of one hon. treasurer in the place of two, which had been the case previously.

At the April meeting, 1900, the club's first two challenge trophies, value thirty guineas, were purchased, and these remained the only two cups offered for competition by the club until the introduction of the ten-guinea challenge cups and breed cups in July, 1906. (I will deal more fully with these in due course.) December of this year (1900) may, I think, be fairly considered the turning point of the club's career. Previous to this date, the club had consisted of members (annual subscription 10s.), associates (annual subscription 2s. 6d.), and affiliated societies and clubs. At an extraordinary general meeting held on December 12, 1900, it was decided on the vote of a large majority that in future all members pay an annual subscription of not less than 5s. (this rule to come into force in October, 1901). At the general meeting, October, 1901, in order to popularise the club and increase its usefulness, a new set of rules was passed, these continuing in force (with a few slight alterations) till October, 1907. At the general meeting, October, 1902, Mr. R. T. Thornton having resigned the hon. secretaryship, Mr. T. Threlford was elected to take his place, a position which he

held till October, 1905. The annual report adopted October, 1903, gives the first indication of the success attending the adoption at the extraordinary general meeting of December, 1900, of a universal minimum membership subscription of 5s., 293 members being elected from October 1, 1902, to September 30, 1903, against 116 in the previous twelve months. The membership roll of the club had by October, 1904, reached the large total of 1,076 members and 96 affiliated societies, though by the balance-sheet published at the same time many of these seem to have been in arrear with their subscriptions.

Mr. T. Threlford having tendered his resignation as hon. secretary in October, 1905, I was elected to fill the vacancy, an honour which I may say was most unexpected and deeply appreciated. In June, 1906, the two ten-guinea challenge cups, one for the best male and the other for the best female bird in the show, were purchased, and offered for competition, with the approval of the committee, to any show, held under club rules, paying the necessary fee of 10s. 6d. per cup. These have not only been much appreciated by the members of the club, but much sought after by secretaries of shows. At the annual general meeting held in October, 1906, the redistribution scheme (dividing up the country into counties or groups of counties), which had been engaging the earnest attention of a large sub-committee for the previous twelve months, was brought forward and, with a few slight alterations, passed. To this scheme, I think, must be given the credit of awakening such enthusiasm in the club as had never before been aroused.

It had often been said, especially by persons living far away from London, that the club's affairs were managed by a clique of fanciers living near the metropolis, who were able to attend the monthly meetings held there. By the new scheme every county can, if it possesses the sufficient number of members, have its own branch and manage, practically entirely, its own business; the council in London being the final court of appeal. The annual report for the year ending September, 1907, I think, bears out these remarks, 401 members having been elected, against 100 in the previous twelve months. During this year (1907) a start was made with four "Breed" cups, value 5 guineas each,

one each for the best Orpington, Leghorn, Wyandotte, and Plymouth Rock, to which have now been added two "Bantam" cups. Mr. Threlford, who had taken over the hon. treasurership on the death of Mr. Marx in November, 1906, having tendered his resignation, it was considered advisable that the two offices of hon. treasurer and hon. secretary be combined. I, therefore, had the further honour of being the first hon. secretary and hon. treasurer of the club. I think it is only fair to say that there was at the general meeting some opposition to this arrangement, but I trust that the statement I hope to produce in October will not only be considered satisfactory financially, but also show that the amalgamation of the offices was desirable from the organisation point of view.

I must not anticipate the annual report to be published in October, but I think I may say that the year 1908 has been a very successful one, both as regards members elected and the large number of shows held under club rules, for the first time amongst which may be mentioned the Royal Agricultural Society of England, the Royal Northern Association, and the Royal Lancashire. Many useful reforms have also been dealt with, such as the "Ring" question, withholding prizes at shows through paucity of entries, sending a black list of unsatisfactory shows to all members, &c.

The objects of the club, which are so well known as scarcely to need enumerating again, are as follows :

1. The promotion of the breeding and exhibiting of poultry.
2. The suppression of fraud and dishonourable conduct therein.
3. The advancement and protection of the interests of poultry breeders and exhibitors.

Under these three headings is comprised, I think, pretty well everything of use to the poultry fancier and exhibitor. No. 2 is, of course, most important, and I have often heard it said that "faking is on the increase and the Poultry Club does nothing!" I trust that the first part of the remark is not true; the second part I know is not! The difficulty which the club has to contend with in dealing with such cases is that rumours of all sorts are spread abroad, but when it comes to collecting evidence, the rumours are either proved untrue, or merely hearsay, and no actual proof can be obtained. Numerous reforms are of course still needed, but as the membership of the club grows so will its power and, with power, the much needed reforms will follow. The old saying "It is no use barking unless you can bite" is, I think, very appropriate in this case. I trust the day is not far distant when it will seldom be necessary for the club to bark, but when that occasion arises it will bite too if necessary!

THE UTILITY POULTRY CLUB.

By B. W. HORNE, Vice-President.

THE most sanguine of those who started the club could hardly have hoped for a membership of over 1,000 after seven years' existence. The growth of the club is, perhaps, the best evidence of its popularity and seeing that no member is allowed to remain after the annual subscription is overdue for a year the present membership of nearly 1,500 is certainly encouraging to those who have endeavoured to make the club an institution for all utility poultry keepers.

Mr. H. Holmes-Tarn founded the club in 1897, and prominently associated with him were Mr. J. W. A. Pedley, the Rev. T. S. Raffles—the popular Rector of Langham—and Mr. Randolph Meech, who, at that time, was lecturing on poultry-keeping. The original committee consisted of Messrs. H. Holmes-Tarn, president; J. W. A. Pedley, vice-president; R. Baynes, Simon Hunter, Randolph Meech, A. Newport, G. Packham, and Miss Wilson Wilson; and B. W. Horne hon. secretary and treasurer. Not many changes have taken place since that date. Mr. G. A. Palmer joined the committee in 1898 and Mr. Percival in 1899, while Mr. Holmes-Tarn, who had been president every year since the club was founded, only retired in 1905 and Mr. Simon Hunter last year.

The object of the club was to encourage the development of utility characteristics in poultry, for, when the club was formed, all the efforts of the poultry keeper seemed to be devoted to the development of fancy points and little attention was given to the utility side of the question. Looking through the poultry papers issued at that time it is interesting to note how seldom the word "utility" appears.

No doubt the advent of the club was looked upon with some suspicion by "the Fancy," but any fears they might have had were soon allayed, for the club, at the outset, explained that it was not antagonistic to the Fancy, and recognised the good work done by that section of poultry keepers in beautifying the various breeds. It was, however, a common practice then and, indeed, it is now, to sell mismarked "fancy" cockerels to farmers and others to improve their stock, and an attempt was therefore made to bring home to the utility poultry keeper the great importance of obtaining birds of good laying strain when importing new blood into his yard. The register of breeds kept by members was started and this, more than anything else, facilitated the interchange of birds and eggs among the members and enabled a more systematic method of breeding to be followed, as the register gave particulars of strain in addition to other information. The register has rapidly increased in popularity and at the present time has over 1,000

entries As it is compiled every year from the returns sent in by members of the club, it forms a fairly accurate barometer of the changing fancy for breeds, even among utility poultry keepers. Eight years ago, among a total of some 300 entries, the Buff Orpington took pride of place, with Minorcas and Silver Wyandottes not much behind them, while Anconas had a fair following and White Wyandottes only a small one. In the register for this year Buff Orpingtons still keep their lead with some 170 entries, closely followed by the White Wyandottes, White Leghorns, White Orpingtons, and Black Leghorns, while the entries of Minorcas and Silver Wyandottes are comparatively small.

The feature of the club, however, that created most interest and for which it has become famous, was the Laying Competition. Mr. Holmes-Tarn conceived the idea and it formed, so to speak, one of the chief planks in his programme for the formation of the club, for he thought that the institution of laying competitions might arouse the enthusiasm among the utility poultry keepers that showing did among the fanciers. The Laying Competitions have always been the most popular feature of the club and undoubtedly they have served a very useful purpose in attracting attention to the great possibilities of the laying hen. At the time of their introduction by the club in 1898 they created considerable interest and some amusement, and they were soon copied by other countries and nations—Denmark, Russia, Australia, South Africa, and Canada—and most poultry keepers are aware how far the competitions of the Australians have outstripped those of the originators. Some regret may be expressed that those very interesting developments of the competitions which we see taking place in Australia have not been imitated by the originators, but with no grant and practically no outside assistance whatever the club has had to run the competitions as economically as possible and leave the work of extending their scope to those who are blessed with a larger measure of practical support. As it is, the competitions have always been run at a considerable loss, and they have generally absorbed the larger part of the surplus revenue of the club. It is, however, very satisfactory to note that the Board of Agriculture and Fisheries have made a grant of £25 towards the expenses of the Twelve Months' Competition ending September 30, 1908. This practical mark of appreciation has much encouraged those who have worked so hard to make this competition a success.

With an annual subscription of 2s. 6d. only, the club has never been able to launch out into any ambitious schemes involving financial risks, and the policy of those who have most to do with the carrying on of the work is to endeavour to obtain a large

number of members, so that in course of time, with greater influence and larger financial resources, they can deal effectively with the important questions concerning the utility poultry industry. The club has, therefore, continually striven to increase the advantages of membership so as to make it worth while for anyone interested in the subject to join, with a result that at the present moment for a half-crown a member can obtain free advice from experts on all matters connected with poultry-keeping, a large Year-Book with the valuable Register of Breeds, free post-mortem examinations, with various literature distributed from time to time, in addition to such obvious advantages as membership of a large club brings when buying and selling stock and eggs. All this, with grants of prizes to village shows for table poultry and eggs and the heavy expenses of the Laying Competition, could not be done if the work were not carried out by voluntary help, and the whole existence of the club has depended upon the services of the hon. secretary, treasurer, etc., in addition to the various assistant secretaries, of whom at the present time there are six, all working gratuitously.

Hampered as it has always been, owing to the lack of any permanent office with a salaried staff, the club has, nevertheless, been able to take a part in some of those matters which most vitally concern the utility poultry keeper, and we find that as early in its career as 1900 it made a gallant effort to obtain an amendment in the Agricultural Holdings Bill of that year, so that a tenant might receive compensation on quitting his holding for any improvement arising from the feeding of poultry on his land. No recorded evidence was available at the time to show how greatly land could be improved by the feeding of poultry thereon, and the club issued forms and collected some interesting figures and obtained the services of Mr., now Sir, Francis Channing in moving the amendment before the Grand Committee. Considering how little was then known on the subject and the small attention given to the poultry industry, it was not surprising that the effort was unsuccessful.

Two large utility poultry shows have been held under the direct management of the club, at the Crystal Palace in 1904 and at the Plymouth Exhibition in 1905, and at both these shows classes were given for appliances as well as for table poultry and eggs. Two important new features were introduced at these exhibitions. Classes were provided for all the most important appliances of use to the poultry keeper, and competitors were not obliged to be trade exhibitors or renters of stands in the exhibition. The exhibits were shown together in their respective classes, enabling their different features to be easily compared, thus making the exhibition much more instructive. During the exhibition free lectures and

demonstrations were given by some of the experts of the club, often to very large and appreciative audiences.

With the continued growth of the interest in utility poultry-keeping, an effort ought to be made to hold some such exhibition every year, when novelties, whether invented by professionals or amateurs, could be shown, together with a large range of modern appliances and a good show of table poultry, alive and dead. If, in addition to this, lectures and demonstrations could be given, with plenty of time allowed for discussion, poultry keepers would not fail to attend the show in large numbers, and this would result in a great interchange of ideas and be most beneficial. To start such a show considerable financial support would have to be forthcoming, though in a few years the show should pay its way. One of the difficulties lies in the reluctance of the leading poultry appliance makers to compete in open classes, but probably this would be overcome when the annual show was firmly established; and the success of the show would, of course, mean a great increase of business to the traders.

Turning now to the aims and aspirations of the club, undoubtedly the greatest efforts of the club should be made to increase the membership. A large number of members means a larger income, without which it is not possible for the club to make any great headway. No other method of increasing the income would be satisfactory, for if the subscription were raised from the present minimum one of 2s. 6d. it would result in the working man being left out from the benefits of the club, and this must be avoided. With a larger income the club could have a permanent staff ready to deal with the work at once as it arises. The secretary should be a paid one, able to devote all his time and attention to the work, and extra clerical assistance should be provided for him when necessary. With a staff and office, an attempt could be made to deal with some of the more pressing questions of the day, but as the club is now constituted it is useless to think it can take up controversial questions or questions that involve any large amount of correspondence or inquiry.

The club serves a useful purpose and membership is well worth the annual subscription of 2s. 6d. It ought not, therefore, to be difficult to obtain a large increase in the number of members.

Perhaps it is not too much to hope that some day the club may be able to conduct its Laying Competitions on a scale more in consonance with the traditions of a country noted for the high standard of its agricultural produce; while there is a large field for experimental and research work in connection with the poultry industry. The improvement of table

poultry, particularly in districts favoured with good markets, is a pressing need and much could be done by encouraging the showing of table poultry, more especially in villages. There is much to be done, too, in impressing upon the farmer the great importance of good stock, for without this most of the efforts to improve the industry will be of no avail. The club must, in fact, spare no effort to bring about a greater development of utility characteristics in poultry.

THE NATIONAL POULTRY ORGANISATION SOCIETY.

By THE SECRETARY.

ORGANISATION is, comparatively speaking, a recent development in this country. Combination of units for the attainment of something that was mutually important has been known for a long period, but was restricted in its scope. The prime ideal has been conservation of individuality in the unit. Hence farmers and others might be willing to act together in their local or general societies, but so soon as anyone proposed to influence, much less control, their operations, either in production or sale, then the innate conservatism of the Britisher exerted itself, and that stolidity which is an essential characteristic of our race offered a wall of impenetrable opposition which could not be overcome. Help is wanted, not interference. So soon as combination or co-operation seeks to violate what is the true principle, namely, a voluntary union of men and women for mutual benefit, then it is doomed.

Ten years ago the position was very serious for the future of poultry-keeping in this country, so far as the purely agricultural side was concerned. In residential and thickly populated districts, where local demand was, and is, vastly greater than supply, arrangements for sale were fairly satisfactory at the period named, though capable of improvement. But in the producing counties it was not so. The number of fowls kept upon farms had increased largely, better and more productive races were being introduced, and advanced methods of breeding and management adopted, with resultant enlargement of output. Owing to the antiquated and thoroughly bad system of marketing in vogue—that which had been in operation for generations when the consuming population was near by—producers failed to obtain adequate returns. Foreigners had practically captured our markets because by rapid collection, careful selection, by improved methods of testing, grading, and

packing, their produce was superior to our own, commanding and deserving better prices, more especially in regard to eggs. Increased production simply accentuated the unfavourable condition of affairs and it appeared as if a lowering of prices must follow, even to the non-profitable point. These facts led to the formation of the National Poultry Organisation Society, the preliminary meeting of which was held, on the suggestion of Miss Smith-Dorrien, at the residence of the Viscountess Cranborne, now the Marchioness of Salisbury, in July, 1898.

From the outset the society has had essentially a practical aim, one touched by no other body, as announced in its rules, which state that—

The objects for the promotion of which the Society is established are : (a) The organisation and development of the Poultry Industry as a most important branch of British Agriculture ; (b) the improvement of the quality and the increase of the quantity of eggs, poultry, &c., produced in the United Kingdom ; (c) the maintenance of regularity and uniformity of supply ; (d) the provision of facilities for rapid transit ; and (e) the bringing of the producers and retailers into closer touch, in order that the best available market may be obtained at a minimum cost.

These are accomplished by the formation of (a) branches, which seek to advance the number and interests of poultry keepers in any district by combining them for mutual benefit, and (b) the establishment of collecting depots on co-operative lines in suitable districts, whose chief work is the collection and marketing of eggs and poultry. The last named receive orders through the parent society, which has a special marketing section, and it has been found that co-ordination in sale is a necessity to prevent competition and consequent cutting of prices by the various depots and for meeting the requirements of traders.

In addition to the above, the N.P.O.S. exerts its influence very markedly in connection with the poultry industry in other ways. The central office is a bureau of information which is used very largely by those requiring advice in our own country, the colonies, and foreign lands ; it publishes a quarterly journal, containing reports as to its own work and general poultry keeping, and leaflets of a practical nature ; it has issued two reports, one dealing with "The Poultry Industry in America," and the other with "The Poultry Industry in Denmark and Sweden," which have had large circulations ; it

collects and makes available statistics and other information of value to poultry keepers ; it keeps a register of poultrymen and women desiring situations ; and generally seeks to encourage and promote the special branch of agriculture with which it is associated. It has a registered trade mark, and "rose-brand" eggs have now a recognised place among home supplies, in that the mark in question is a guarantee of native origin, of absolute freshness, and of a high standard of quality.

The society has been fortunate in securing the active support of every section of the community, more especially those who at one time were antagonistic to or prejudiced against poultry-keeping. Formerly, and still to some extent, many associated with agriculture were opposed to this pursuit, for reasons which need not be given in detail. Thanks largely to the influence of our president, the Marchioness of Salisbury, whose efforts have been constant and invaluable, that feeling is almost destroyed. Among others who have rendered great assistance by their influence and generous support are H.R.H. the Princess Christian of Schleswig-Holstein, the Countess Dowager of Arran, Lord Blyth, Lord Lucas, Lady Keane, the Duchess of Somerset, Sir Walter Palmer, Bart., Sir T. H. Elliott, K.C.B., Secretary of the Board of Agriculture, Mr. C. E. Brooke, Past Master Poulterers' Company, Mr. Cary Coles, Mr. W. D. James, Miss Smith-Dorrien, Col. Van der Weyer, Col. R. Williams, M.P., and many others too numerous to mention.

As to the results achieved, apart from the actual branches and depots formed, each of which has exerted a very great influence, the following may be quoted from the last annual report :

One general and striking result of the society's work is seen in the remarkable advance in the standard of quality of home produce which has marked the last few years, not restricted to that marketed by our depots, but elsewhere. It is not too much to state that collectors and traders generally give attention to rapid marketing, to careful selection and packing, and producers carry out their share of the work in a manner which at one time was absolutely unknown. The result is seen in a very considerable advance in returns secured by poultry keepers, who find an encouragement that leads to extension. The prices obtained last year were the highest known in the history of the industry. Consumption is growing rapidly and consumers insist upon having both eggs and chickens fresh and of first quality. These facts should be kept in view, for the influence of the society is not to be measured by the number of its members or branches.



THE HOMESTEAD, Mr. PROWSE'S 20-ACRE HOLDING, HADLEIGH, ESSEX.

[Copyright.]

THE SMALL HOLDER AND THE HEN.

By "HOME COUNTIES,"

*Author of "The Townsman's Farm," "Poultry Farming: Some Facts and Some Conclusions,"
"The Case for the Goat," "Country Cottages."*

IF the small holdings movement is to make progress to anything like the extent which its well-wishers and supporters hope, it must have a noteworthy influence on the poultry industry. To the small holder, small stock naturally appeals, and among small stock none is likely to be more popular than poultry. As the more trustworthy poultry books have taught for a generation, the small holder of the Continent is the great poultry keeper. It is his eggs which make up the thousands of long hundreds which reach our shores from France, from the ports of the Low Countries and of Scandinavia. He, whoever else fails to do so, makes poultry pay. The methods by which the small holder works his holding vary according to latitude and longitude; but from Norway to the Near East, from France to Russia, the hen invariably pays her way, and more.

It is hardly necessary at this time of day, when Mr. Pratt and Mr. Brown have dinned the facts into the ears of the public, to occupy much space in pointing out that a large part of the success of the Continental small holder's poultry-keeping is due to co-operation. In some parts of Europe the middleman of the poultry world may get an undue share of the benefits of the co-operative method. In the main, however, it would appear that the man who owns the hens has found co-operation a good thing. Hans and Otto and Friedrich and Max, or it may be Frau Hans, Otto, Friedrich and Max, make money out of their poultry-keeping because they market their birds or their eggs together. It does not matter much how they do it: the details differ a little in every district. The Dutchman, the Frenchman, the German and the Norseman go about the business all

in their own way. But the result is the same. They have ranged themselves, as it were, with the tendency of the time, which is to bulk commodities before selling them.

The success of the new small holders of England in their poultry-keeping is bound up with the acceptance of the co-operative principle. Happily, we have in existence in the National Poultry Organisation Society, in its propagandist and commercial departments, a preacher, a teacher, and a leader in co-operative poultry-keeping. The figures which were given



PORTABLE HOUSE ON SMALL HOLDING. [Copyright.]

at the last poultry conference by Mr. Warren of the success of co-operation in the Framlingham district in the marketing of eggs and poultry must have come as a revelation to some readers of the excellent Report in which they are now embodied.

The experience of the National Poultry Organisation Society not only shows the high degree of success which may be obtained by combination in the marketing of eggs and poultry, but suggests developments of the co-operative plan in poultry-keeping. Before there can be birds and eggs to sell, there must be stock birds and sittings and chicks. Within an hour of dictating these lines I had been a listener, in a somewhat remote part of northern Scotland, to an expression of gratification by the wife of an occupant of a small holding at the wonderful bargain she had obtained in the spring. She had seen advertised, for 4s. 6d., a dozen day-old chicks. In considerable doubt she sent the money to the address mentioned. Quite promptly she received the little creatures "in such a nice little box, and they were not a bit the worse for their journey, and I had a clocker ready, and I put them under her, and they all lived, and I never had such strong birds." The day-old chick supply system was quite a novelty in the district to which I refer, and I have no doubt that as a result of the experiment which has been tried there will be many local customers for day-old chicks. It is obvious, I think, that one form which co-operation might well take in poultry keeping would be the supplying of day-old chicks. In a community of small holders it would be as extravagant of each man to buy an incubator as to buy a threshing machine. In the same way it will not be necessary for every small holder to buy expensive stock birds. One man in turn will make the

necessary expenditure for new blood, and his neighbours will benefit in due course.

In the matter of turkeys there will be, of course, a gobbler for the community at large. Reverting to the day-old chicks, experience has shown that among small holders there is an opening not only for the production of the little creatures for sale, but for providing means of incubation for all and sundry who care to bring their eggs to be hatched.

I cannot leave this branch of the subject without recording the vivid impression which remains on my mind of a scene I witnessed in a small village in Holland. I alighted from my trap at a large auction mart, which seemed a marvellously imposing building in a region so sparsely cultivated. It was the mart owned by the small holders of the district. To it they sent their produce. There it was inside, enormous quantities of it. Presently an auctioneer mounted the rostrum—the small holders' auctioneer—and knocked down the eggs and poultry and other country produce piled up in the mart, first to one man and then another in a large group of merchants assembled before him. The merchants had to come to the small holders to buy, and they had to buy at what were practically the small holders' prices, on the days and at the times that suited the small holders' convenience.

I thought as I stood there, looking round, of the very different scene in Leadenhall and Smithfield markets and the marts of a similar character in our great provincial towns. In comes a box, a crate, a basket and a whole series of boxes, crates and baskets, all of different sizes and all of different degrees of efficiency as regards packing. The small holders, by the agency of the railway companies and



FLOCK OF LEGHORNS AT HADLEIGH. [Copyright.]

carriers, have placed their produce at the feet of the factors. Out come the contents of the heterogeneous packages. It is a wonderful sight—as a spectacle of uneconomical marketing. Bad birds, fair birds, medium birds, good birds, first-class birds; nicely graded, clean, well-packed eggs, and, alas! any number of eggs that are none of these things. I shall not abuse the factors. They are just men of like passions with our own. They have the men with whom they are dealing, men whom in

most instances they have never seen and never will see, and do not stand in the least awe of, at an advantage, and, as they would no doubt say, not being in the business for their health, but for the very same reason that the small holders are in business, to make a living, and put something by for their progeny and their old age as quickly as possible, they proceed in a modest way to improve the shining hour. Why not? Is not co-operative marketing coming, co-operative marketing which will not be exactly a system in which the produce of the small holders' toil will be offered to the merchant with a humble "Hope you will give us as much as you can, sir?"

Briefly, small holding-cum-co-operation is going to put on the market better bred, better fed, better killed, better packed and better sold poultry. It is also going to provide fresher, larger, cleaner and better sorted eggs, and, "what is mair than a' the lave," the producer of these food supplies is going to be decently paid for his labour, and the British public, which appreciates a good thing, and is not a bit close-fisted when it is fairly dealt with, is not going to grudge him in the very least what he makes.

It is not necessary to say much more about co-operation. One can think of lots of ways in which it is going to help the small holder and the poultry industry. Mention should perhaps be made, however, of the probability of communistic egg preserving. The pictures in Mr. Brown's last Continental Report of those big Danish concrete tanks of millions of eggs reposing in lime water are a very practical incentive to up-to-date methods.

Those millions of foreign eggs that oppress the imagination of the glib, but sadly uninstructed M.P.

presiding with empressement at a poultry show, and are used, as we all know who have spent half a day in looking into the subject, in the manufacture of the bindings of our books and the preparation of the material our gloves are made of, and in the making of the mysterious products which emanate from the

factories of the wholesale confectioner, not to speak of providing—but this is, of course, a much better quality—"new laids" for carters' "corfee houses" and "cookers" for raising the cakes which go along with the "corfee"—these eggs are not going to be stopped coming into this country by any extension of small holdings this generation or the next will ever see. The cheap foreign egg this country needs, and when it understands the facts of the case, is only too pleased to have. But small holdings should put on our markets a much larger quantity of eggs of a grade which it pays to produce than there are now available.

It should do something to satisfy the demands of the voracious, insatiable Mr. Verney Carter, of the N.P.O.S., whom one figures stamping about the great London termini like another Mariana of the Moated Grange:

He only said, "My life is dreary,
It cometh not," he said.
He said, "I am aweary, aweary;
I would that I were dead."

This cormorant of a Carter has never yet been satisfied with a big enough consignment of eggs, with the rose mark on them, for disposal to his London customers. Triumphant small holdings may at last provide him with all the supplies he seeks. His patient waiting for good eggs to supply good customers deserves to be rewarded, surely.

John Bull is going to be a changed creature in time. Already our Continental visitors find a difficulty in meeting anywhere in London or the provinces a J. B. of the physical proportions provided by "Punch" and F.C.G. J. B., unlike the old lady at the tea meeting



COLONY HOUSES AND RUNS AT HADLEIGH.

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in the "Pickwick Papers," who was "swellin' wisely," is shrinking visibly. He does not fill out the clothes which the caricaturists still insist on giving him. He is ceasing from living on beef and pickles and pickles and beef. He is going in for lighter fare. He has found that his Continental neighbours' devotion

to chicken and omelettes is not so mad as he had imagined it to be. He is really a most reasonable old gentleman. Just as he has taken wholeheartedly to tomatoes and bananas, so he is taking to chickens and eggs as staple articles of diet and not as accessories. Undoubtedly the market for good birds and good eggs was never more promising than it is now. It is difficult to see over-production ahead. Even vegetarianism must help the small-

holder poultry keeper, for white flesh is the recognised half-way house of those on the road to vegetarianism, and eggs bulk largely in the diet of those who journey the whole way. One has only to open the medical papers to see that a large part of the medical profession is oppressed by the idea of the grossness of beef and won't be happy until it gets most of its patients on to a lighter diet. The small holder of the future will no doubt count it a dispensation of Providence that you can't make good omelettes without breaking *new-laid* eggs—each of which is twopence or three-halfpence in his pocket.

The development of small holdings comes at a happy period in the history of poultry-keeping. Extravagant ideas of poultry-farming, and ignorant notions of the supreme value of fancy poultry in commercial poultry-keeping, have been ridiculed almost out of existence. The fact that from more than one quarter the suggestion has been made that cross-breeds should be substituted for a few of the pens at the laying competition is a striking sign of the advance of common sense in the business of making money out of hens. The small holder, in developing the poultry side of his enterprise, is in nothing like the danger he might have been in a few years ago of wasting his money on will o' the wisps or of losing money by following the advice of well-meaning but unpractical advisers. The facts as to the conditions in which poultry can be made to pay on the small holding are now established beyond question. The birds must be healthy. There must be no breeding from the progeny of stock which can only come through the laying competitions by being



A MIXED FLOCK AT HADLEIGH

[Copyright.]

coddled. They must be of breeds which experience has proved to be the right breeds for table poultry or eggs and for the localities in which the stock is kept. They must also be of strains in which a reasonable level of egg production has been reached. They must be fed, too, on the most economical lines. The small holder will have an advantage over many of his farmer rivals in that he will give his fowls more attention and know them better.

Some small holders who have had the requisite experience and possess the requisite aptitude will, no doubt, make successful ventures on newer lines in the production of early birds. They will also, no doubt, break ground in the direction of "petits poussins" and "poulets des lait" production. This is not always particularly suitable work for big farmers. The small holder who can give the personal attention which makes all the difference between a moderate and a remunerative return is usually better placed for it.

The student of small holdings knows only too well that there are few districts in which the working of small tracts of land can proceed exactly on the same lines. There may be districts, therefore, in which, for one reason or another, poultry will not make a great appeal to the small holder. But if he has neither means of selling a poultry crop co-operatively nor customers at his door, and so prefers to devote his attention to milk or the development of arable land, he will still find that a little flock of poultry, if all the eggs laid and all the cockerels produced are consumed on the premises, is a factor in his success which cannot be overlooked.

THE POULTRY INDUSTRY IN RETROSPECT.

By EDWARD BROWN, F.L.S.,

Secretary National Poultry Organisation Society; Lecturer in Aviculture, University College, Reading.

A BRANCH of food supply, the total annual consumption of which exceeds £20,000,000, and which has practically doubled in the last thirty years, adding to the amount earned by home producers in food supplies upwards of £6,000,000 in annual value, deserves the attention of all who are interested in the national welfare. The justification for these figures is given below. It is well, therefore, to look upon the past. We know that there is the scriptural example of the evil of looking back in the case of Lot's wife. It may be taken, however, that the lesson to be drawn from that ancient story is that the saline change was because the fair lady was longing for what was left behind. We may escape such a fate, because in making retrospect we are not desiring to revert to the original condition of things, but simply marking the progress already made in order to obtain encouragement for the tasks that are yet in front.

For the purpose of our review the last generation may be taken and we will consider the progress made since 1878. There are various reasons for selecting that date. Personally, although my own association with poultry-breeding began four or five years previously, yet the more active share in this work dates back from the year named, which was also that of the great Paris Exhibition, at which the Rouillier incubator was introduced. As that machine, although used now to a very limited extent even in France, exerted a vast influence, in that it made possible artificial methods of hatching on practical lines, its invention marks an important era in the history of this industry. It must not be thought that nothing had been done for the development of poultry-keeping prior to the time named, but others whose memory carries them back further may be left to describe what then took place. All honour to these pioneers upon whose efforts some of our later success has been built. Further, by 1878, fancy or exhibition poultry-breeding had largely accomplished its purpose, as shown below, but perhaps most important of all was the fact that in the year named the country had entered into the terrible time of agricultural depression, when old methods had to be abandoned and when the opening of the world by intercommunication had so reduced prices for general agricultural products that a reconsideration of the methods adopted became imperative. What that depression meant this is not the place to discuss.

It is of interest to consider what was the condition of farm poultry at that time. With the exception of the South-eastern counties of England, where table poultry breeding was a recognised branch of agriculture and had been so for nearly a hundred years; of Buckinghamshire and one section of Bedfordshire, where duck raising was carried out on extensive lines—although there were evidences of the results of false systems of breeding in the decadence of the Aylesbury duck; of Cumberland and a few other counties in England; together with portions of Ireland, it may be stated that the methods, if these can be described by such a term, were as bad as they could be; in fact, poultry-keeping was not an industry; it was not carried out on commercial lines, it was merely an appanage to the farm, left chiefly to the women folk, which the men generally believed was altogether unprofitable. The description here given does not by any means exaggerate the condition of affairs. Eggs were to a large extent a season product, chickens over the greater part of the country were expensive and poor, and both, except the cheaper foreign supplies, did not enter into the ordinary food of the people to any extent. Unfortunately there are no figures available as to the number of fowls in the United Kingdom at that period. In 1884 and 1885, seven and eight years later respectively, the Board of Agriculture included Poultry in the Annual Statistics, but they were for various reasons abandoned from that time and have not been re-introduced until the present year. The figures then given were that in 1884 there were altogether in Great Britain 16,061,012 fowls of all kinds, of which 500,000 were turkeys, 885,000 geese, nearly 2,400,000 ducks, and 12,300,000 fowls. In Ireland there were 12,746,048 head of poultry, of which 766,000 were turkeys, 1,883,000 geese, 2,600,000 ducks, and 7,500,000 fowls. To put it in another way, in England, upon the farms of the country, there were only 494 head of poultry per 1,000 acres of cultivated land; in Wales, 487; in Scotland, 479; and in Ireland, 1,081. Thus in Britain there was less than half a fowl per acre. What the present year's figures will be remains to be seen. There were, however, at that time signs of awakening ideas. Here and there some farmers, especially younger men, were beginning to realise that there was money in poultry, but perhaps the chief indications were various wild-cat schemes for poultry farming, which in the judgment of the authors offered a

means of rapid fortune and gigantic success. It was not in that way, however, that evolution was to be, nor can the production of a country be built up on such a basis. It must be remembered that in every land we have to depend upon farmers for the bulk of the eggs and poultry produced, and the fact that in Great Britain there were between five and six hundred thousand agriculturists who could add largely to the number of poultry maintained by them without interfering with anything else offered the foundation upon which this industry must be built. The figures indicated above show that in Ireland more was being done than in the larger island; but Ireland was entering upon a period of unrest and general upheaval, which continued for several years, and the methods adopted were altogether unsuitable to meet modern conditions. In no country has a greater opportunity been lost than in Ireland, which is now tardily endeavouring to regain—with a considerable measure of success—the territory left unoccupied.

Mention has been made already of the exhibition system, which up to a given point was of the greatest benefit, in that it secured to us improvement of the various races of poultry and introduction of new breeds. To such an extent had this grown that whenever poultry-keeping was mentioned it was associated with exhibitors. The improvement of external characters had led to an enormous increase of competition, and throughout the country there was a great army of poultry keepers concerned primarily in developing the higher grades of poultry. The competition referred to led, as is always the case, to ultra-refinement, to the laying down of arbitrary and useless points, in many cases to the adoption of systems of trimming and faking which were a disgrace, if nothing more, and, most serious of all, to the fact that the economic qualities were ignored entirely for external characters. These were due largely to the adoption of false standards, which paid no attention to the real object of the fowls and threw their weight in the development of what was useless, however beautiful it might be. At first farmers and others desiring to obtain the fresh stock they needed went to fanciers, and in some cases with great advantage. Then there came a time of hesitation. It was found that often these highly bred birds were less prolific than the ordinary common fowls, giving weight to the suggestion that mongrels were more profitable than pure breeds. With the further exaltation of external characters efforts had to be put forth to meet the growing demand for more profitable poultry, and the opportunity which fanciers had was lost for ever. There came a period when these were no longer depended upon for stock, because there grew up specialist breeders who, while retaining the pure racial characters of the different

breeds, sought to develop their economic qualities. In this work the Utility Poultry Club has helped materially, and it may here be stated that the agricultural and general Press have contributed very largely to the success which has been achieved in this direction.

All the time the demand for eggs and poultry had been growing enormously, and as the growth of home supplies was comparatively small consumers were compelled to depend to an increasing extent upon foreign supplies. The growing needs of our people could not wait for home producers. How these imports have grown is fairly well known. In 1878 foreign eggs imported numbered 6,531,456 long hundreds, in value £2,511,096. At that time rabbits were included with poultry and game, and we shall not be exaggerating either way if it is stated that the value of the poultry imported was about £200,000. Thus the total imports of poultry produce was less in value than two and three-quarter million pounds sterling. The Irish supplies were in value about £1,500,000 and home produce was estimated at about £4,500,000, making a gross total consumption of nearly £9,750,000. There was also another factor. Some other countries, taking advantage of the growing demand here, commenced to cater for our markets and thus the pressure of foreign competition became very intense. The French were the first to take up this work and held the field for several years. Denmark then came into it, and the development of the industry there is one of the most remarkable features of modern agriculture in Western Europe. Afterwards the Italians, the Austro-Hungarians, the Russians, and a score of others entered into competition. Some of these, by the grading of the qualities, by improving the methods of collection, of testing, and of packing, practically captured our markets, and it was a fact that frequently foreign eggs sold at a much higher price than home supplies produced within a few miles of the place of consumption. The loss by bad systems of marketing in this country, by methods which had become altogether antiquated, and by the indisposition of our people to rise to the new conditions has been enormous and still is found to a considerable extent. It was this fact that led to the formation of the National Poultry Organisation Society in 1898.

The difficulties of bringing about the changes demanded were enormous. Thirty years ago, twenty years ago, those who advocated poultry-keeping upon commercial lines as a branch of agriculture were looked upon as little better than fanatics. The fact is that they had to go on waiting for the generation then living to pass away and for a new generation "which knew not Joseph" to come into being. That is the method of advance in all ages; but after a few years' work it became evident that there was a steady

but a sure improvement taking place. The dangers of disease, as a result of the increased number of fowls, led to the adoption of the portable-house system by farmers, by which, scattering their birds over the land, the full value of the manure can be obtained, the fowls can be fed more cheaply, and no interference with crops or other stock takes place. It would have been impossible for growth to have been made without the adoption of some such system. The next stage onwards was in 1891, when, thanks to the action of our legislature, a large sum of money for technical instruction was placed at the disposal of the various county councils and definite teaching in poultry-keeping was, with other subjects, placed within the reach of our rural communities. It is interesting to note that the first county council to take up this work was Northumberland. Further, some of the leading exhibitions had by this time introduced poultry sections, keeping in view the practical side. In 1885, after a very great struggle, the Royal Agricultural Society was led to include poultry classes in its annual show, held that year at Preston. The Dairy Show had always given attention to poultry, and by its introduction of dead classes greatly stimulated this branch, which was later on still further encouraged by the establishment of a table poultry section at the Smithfield Fat Stock Show, due to the liberality of Sir Walter Gilbey, Bart. Other exhibitions followed suit and the whole country was permeated in this way. With the invention of the Hearson incubator, about 1882, what had previously been to a large extent a plaything became essentially a practical aid to the progressive poultry keeper, and it is not too much to say that the development of our industry would have been impossible without the adoption of artificial hatching and rearing. Later, other valuable appliances and methods were introduced. The question of ventilation in houses was studied, trap nests enabled the poultry keeper to get rid of his drones, and all through the past thirty years records tell us of new methods which have helped to a marked degree; in fact, some of the younger poultry keepers, if they could only realise how many breeds and appliances and methods with which they are familiar were unknown in 1878, would be better able to understand the enormous progress which the industry has made. Then there came the rise of breeding plants where utility stock was the main object, leading to a great improvement in the average production of the country.

What are the results which have been achieved? As to these something has been said above. Throughout the country the increase in the industry has been enormous. A few years ago a well-known landowner told me that in his own parish in the Midlands five times as many poultry are kept as ten years previously, in spite of the fact that it is in a great hunting

district. What is true there is true more or less elsewhere. The census which was taken in June last will help us to realise perhaps more fully than ever before the growth of the industry. Fortunately we have figures with regard to Ireland. As already indicated, the estimated value of the poultry crop of Ireland in 1878 was £1,500,000; last year it was £3,800,000, an increase of no less than £2,300,000. In Britain it will be better to wait for the coming census before we make a very close estimate, but if we take the estimated value of the poultry crop in the United Kingdom in 1878 as £6,000,000 in value, that will not be far out. Whereas last year, 1907, it was in value at any rate twice that amount, and a growth of £6,000,000 even in thirty years is a very remarkable one. If we add that to the foreign imports, it will be seen that the total wholesale value of the eggs and poultry consumed in the United Kingdom last year was upwards of £20,000,000.

So far as other countries are concerned, space will not permit of these being dealt with in detail. It may be stated, however, that marked progress has been made all over the world. Reports from almost every country are that the poultry industry grows quickly and that more and more attention is being paid to a branch which yields rapid returns and in which the capital outlay is comparatively small. In Europe, France has during the period named made the least progress. Thirty years ago in its methods and the relative importance of the industry it easily stood first, but probably it is now fifth, due to the fact that while other countries have been forging ahead it has merely marked time. In the Netherlands progress has been steady, but not very rapid, more especially in certain directions. Denmark, of course, stands out as one of the most remarkable countries in the development of this industry; from practically nothing it has grown up to involve an export in value of nearly £2,000,000 per annum, and to a lesser degree this is true equally all over Europe. Russia, in spite of her great disadvantages, has improved and now she sends more eggs and poultry to Britain than any other Continental country. That is, however, not so much due to the growth of the industry as to its better organisation and the fact that it is so large a country. Wherever the exports have grown the trade has been organised; in Denmark, and to a lesser extent in Sweden, on co-operative lines, but elsewhere by the enterprise and perseverance of traders, who have seen in the British markets a demand which they could supply and which they have found profitable in every sense. In the British colonies, although the trade at the present time is by no means large, it is growing very rapidly, and it is a startling fact that everywhere the improvement of methods, both in production and in sale, increases the local demand. Canada at

one time seemed as if she were going to send vast quantities to this country, but they are being more than absorbed by the stimulated consumption as a result of better methods adopted. So far as the United States are concerned, the figures given show that she produces nearly as much in the way of eggs and poultry as all the rest of the world put together. At the second National Poultry Conference, held at Reading, in 1907, an estimate was made that the world's poultry crop was in value about £200,000,000 annually, but in the light of later figures it would appear that this must be considerably increased, from which fact it will be realised that poultry breeding, no longer the sport of the fancy or relegated to anyone and everyone, is a pursuit well worthy of serious men and women, who find in it rewards for their efforts and enterprise. One fact which stands out clearly, than which nothing better can be adduced as proof of the changed views with regard to poultry-keeping, is that practical investigators all over the world are giving attention to the many problems which present themselves, and from their work we may hope that great advantages will accrue. Thirty years ago there was no place where poultry-keeping was taught in connection with general agricultural education. Sporadic lectures were occasionally delivered, but system was altogether absent. Now in every advanced country the curri-

culum of agricultural colleges embraces this subject. At some of these special poultry plants are maintained, and a few months ago Cornell University enhanced the status of the whole industry by the appointment of Mr. J. E. Rice as Professor of Poultry-keeping. The literature upon this subject is now voluminous and those who have been engaged in the work of placing the industry on its present plane can look back upon the past thirty years with unalloyed satisfaction.

In this connection it would be a very great pleasure to mention the names of many, some of whom have passed from us, who have helped by their influence and by their labours. A few of these stand out prominently, others are known to a very limited extent. To give any names, however, would be invidious unless the list were a complete one. It is the greatest satisfaction to know that central authorities, including our own Board of Agriculture, and similar departments in many foreign and colonial Governments, have recognised the importance of the industry by the help they have afforded, either in the dissemination of information or by direct efforts for the promotion of poultry-keeping. So much for the present, therefore. In another article I hope to deal with the prospects of poultry-keeping in the years that are before us.

WHAT THE POULTRY INDUSTRY IS DOING FOR IRELAND.

By THE EDITOR.

TWO important reports have just been issued by the Department of Agriculture and Technical Instruction for Ireland, namely, *Report on the Trade in Imports and Exports at Irish Ports during the Year ended 31st December, 1906*, and *Seventh Annual General Report of the Department, 1906-07*, which reflect the greatest credit upon the Department by the completeness of the records, and indicate the remarkable work which is being done for the development of agriculture in that country. The former of these gives for the first time statistics of the import and export trade, and yet, while these statistics should have been available long ere this, they are better late than never.

It is impossible to deal adequately with the reports, as they deserve, and we must refer readers who wish to study them more completely to these two publications, which can be obtained through the usual channels. But in respect to the poultry industry

there are some startling facts, especially as to the growth of exports, which we present as showing the vast results achieved by steady and persistent effort on the part of those concerned in the development of poultry-keeping. Poultry products now stand second among the various exports.

Taking first the report on the trade in imports and exports (C. 2126), it is stated :

The estimated value of poultry exports in 1906 amounted to £725,441, as compared with £696,923 in 1905, and £645,358 in 1904. Thus in two years an increase of £80,083 has been recorded. The development in the egg trade can be best seen from the following statement of quantities and values of imports and exports during the three years, 1904, 1905, and 1906:

	Imports.		Exports.	
	Gt. Hds.	Value.	Gt. Hds.	Value.
1904 ...	114,114	£37,087	5,513,814	£2,205,526
1905 ...	116,002	41,084	6,098,451	2,515,611
1906 ...	99,377	37,266	6,417,435	2,727,410

Diagram I.—IRISH IMPORTS AND EXPORTS OF AGRICULTURAL PRODUCTS AND LIVE STOCK, 1906.

PRODUCT OR STOCK.	EXCESS OF IMPORTS.		EXCESS OF EXPORTS.												
EGGS*													£2,690,144
POULTRY*													725,441
FEATHERS													59,064
BEEF	£219,847												—
MUTTON	116,505												—
PORK	—												117,028
BACON	—												223,209
HAMS	—												424,295
OTHER DEAD MEAT	—												38,295
BUTTER*	—												3,248,687
MARGARINE	15,545												—
CHEESE	113,166												—
HORSES	—												1,373,950
FAT CATTLE	—												3,749,615
STORE CATTLE†	—												5,088,934
CALVES	—												277,685
SHEEP and LAMBS	—												1,135,682
PIGS...	—												1,477,821

Each complete square represents £250,000 sterling.

* These figures do not include the exports by Parcels Post, amounting in 1906 to 30,000 cwt. Allowing two-thirds as butter, and one-third eggs and poultry, there should be added £140,000 for butter, £25,000 for eggs, and £9,000 for poultry respectively.

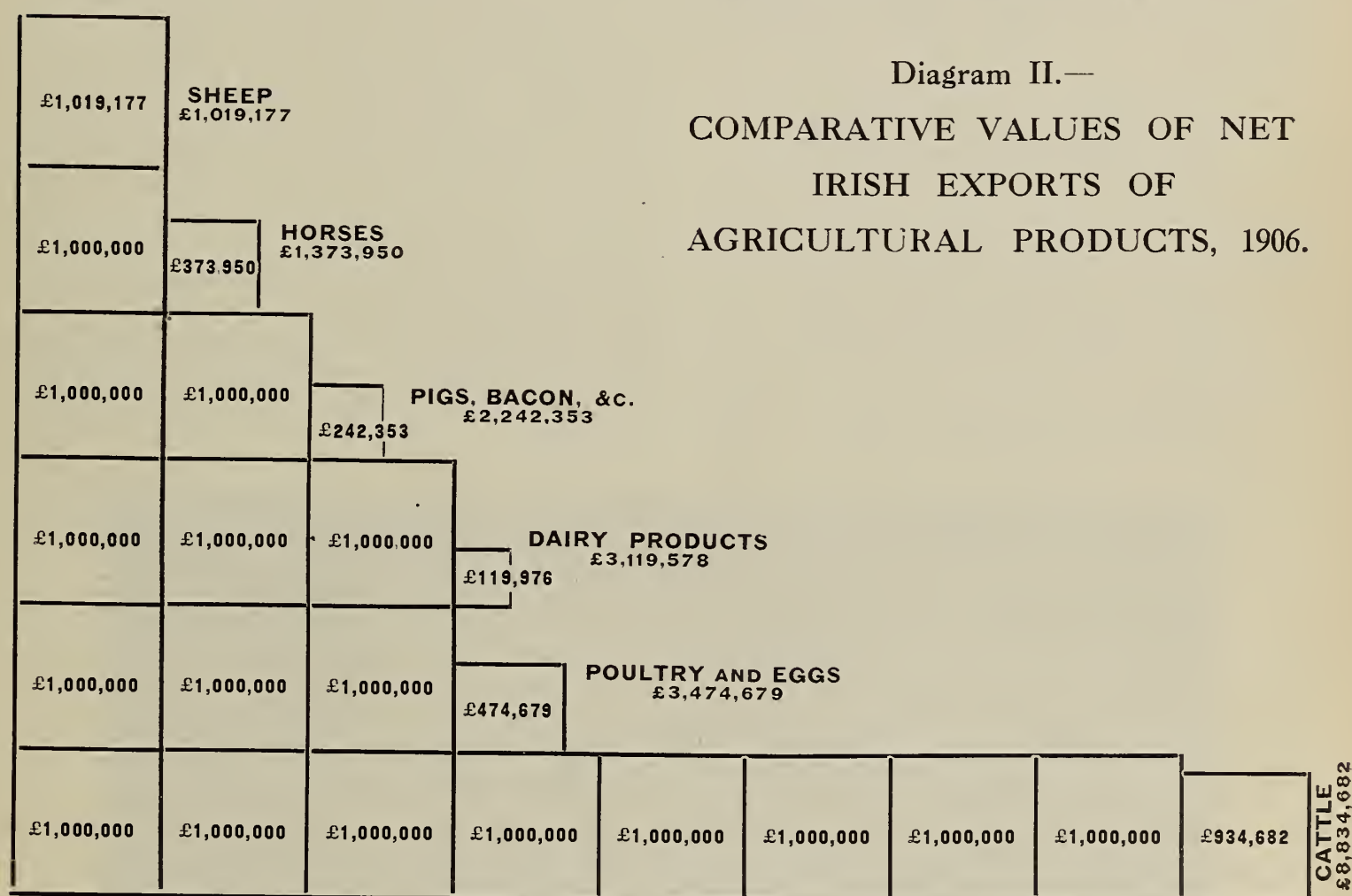
† The imports of breeding cattle, amounting to £12,990, are deducted.

From these comparative figures it will be seen that the export of eggs has again substantially increased, the value of the eggs exported in 1906 being estimated to exceed that of 1904 by £521,884. The export of eggs and poultry together in 1906 amounted to £3,452,851, and if to this figure is added the export of feathers, amounting in 1906 to £59,064, a total export exceeding £3,500,000 is recorded. These figures do not include the value of the quantity sent by parcel post. On the other hand, the imports of poultry and eggs into Ireland are small. In 1906 the import of eggs was lower than in 1905. Thus, in estimating the value of the poultry and egg industry to the country, it has to be borne in mind that practically the entire home demand is supplied by the home article and that the export represents the surplus production of poultry and eggs. These facts bring home the great importance and value of the poultry and egg industries to Ireland.

Diagram I. shows this clearly. It will be seen that in exports store cattle stand first, fat cattle second, butter third, eggs fourth, and pigs fifth, but to obtain the net results of the respective sections we have deducted the imports of beef from the cattle exported, of mutton from the sheep exported, and of margarine and cheese from the butter exported. Thus we are enabled to realise the net value to the Irish people of sheep-breeding, horse - breeding, pig - breeding, dairying, poultry-breeding, and cattle-breeding respectively, which is shown in Diagram II. As a result it is seen that cattle-breeding stands easily first, poultry-keeping second, dairying third, pig-breeding fourth, horse-breeding fifth, and sheep-breeding sixth. It is

Diagram II.—

COMPARATIVE VALUES OF NET IRISH EXPORTS OF AGRICULTURAL PRODUCTS, 1906.



As the value of eggs and poultry exported from Ireland in 1887 was £1,650,000, it will be seen that the trade has more than doubled in twenty years and now, with the exception of Russia, Ireland ships more eggs to Britain than any other country and its supplies of poultry are nearly as large as those of the rest of the world. Bulking all poultry produce together, Ireland is an easy first and thus regains her former position. That she will do more everyone hopes and believes.

An important point is the relative position which poultry-keeping holds to other agricultural produce.

gratifying to find that poultry is the second greatest of all Irish agricultural industries.

One of the supreme difficulties which pioneers in poultry culture on commercial lines have had and still have to meet is recognition of the value and importance of their pursuit. Central authorities, public bodies generally, and agriculturists have ever been inclined to regard poultry as of small relative value. Money is freely given in many ways for general agriculture, stock-breeding, and dairying, while every shilling spent on poultry is begrudged.

It is only fair to state that this view has been less apparent in Ireland than in Britain. Even there, however, the money expended upon the promotion of poultry-keeping has yielded a greater result than in any other branch save one. We have endeavoured, therefore, to obtain from the General Report of the Department (C. 4118) statistics as to the sums expended on behalf of the respective agricultural industries, though these are not as clear as might be wished.

Leaving out of consideration all expenses of administration, either by the department or county authorities, grants to the great agricultural colleges, to shows, &c., in some of which poultry would obtain a modest share, the following appears to be the total expenditure in each section (figures for sheep are not given):

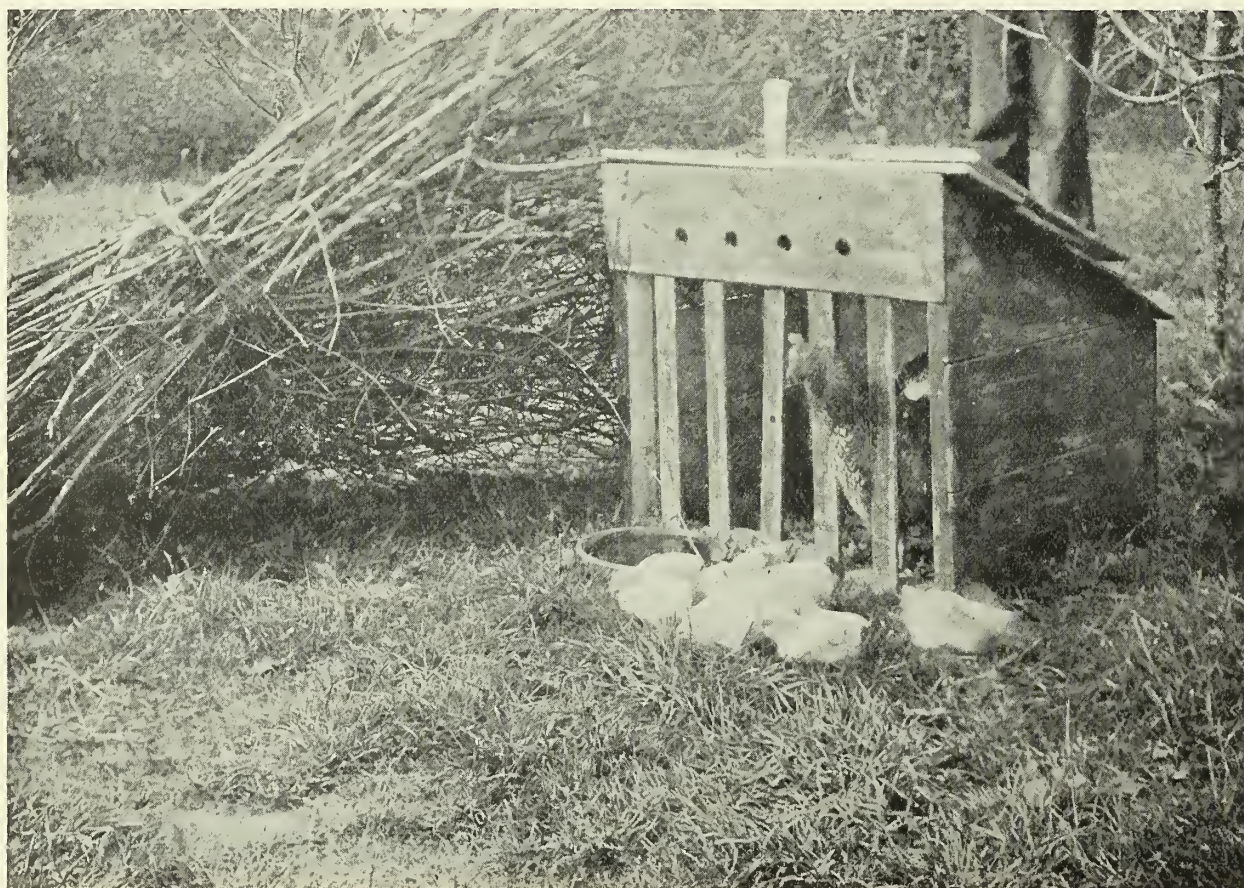
Cattle-breeding (including premiums, cattle diseases, special investigations, share of county schemes, and sums granted for improvement of live stock)	£52,111
Dairying (including improvement of creameries, cheese experiments, county schemes, live stock, Ulster Dairy School, and Munster Dairy School)	20,431
Poultry-keeping (including special investigations and county schemes) ..	13,228

Horse-breeding (including premiums and county schemes for live stock)	£13,097
Pig-breeding (including premiums, investigations, and county schemes) ..	6,765

These figures are subject to revision, but from the information given seem to state the case fairly. As indicative of the proportion of the above expenditure to value of exports we give the amounts spent per each £100 of net exports:

Horses ..	19s. 1d. per each £100 of Irish exports.
Dairying ..	13s. 1¼d. " " "
Cattle ..	11s. 8d. " " "
Poultry ..	7s. 7¼d. " " "
Pigs ..	6s. 0¼d. " " "

Thus we find that horse-breeding, which is lowest but one of the above in export values, has had proportionately the greatest amount of public money, and poultry, which stands second in export values, has had nearly the least. For every £100 spent in promotion of horse-breeding the exports are in value £10,568; on dairying £15,294; on cattle-breeding £17,149; on poultry-keeping £26,318; on pigs £33,319. It is evident that money spent on pigs and poultry yields the greatest return. Such facts should encourage Irish poultry keepers to demand a more adequate recognition of their industry. They desire to see every branch of agriculture encouraged to the fullest extent, but *pro rata* to its value to the national prosperity.



THE HALF-CROWN CHICKEN.

By J. W. HURST.

IT is an ancient tradition of the old-fashioned rearing grounds of the south-east, that the half-crown chicken is more remunerative than those sold at the highest prices of the year, and the tendency of personal experience is to some extent confirmatory, although there are limitations and reservations to this as to so many other statements regarding poultry—which are not, however, always apparent. The half-crown chicken here referred to is not the bird sold at that average price in the markets during the dull season, but the lean unfattened kind which the higgler values at eight for a sovereign; and the traditional belief as to its greater profitableness is that of the rearer. The opinion of those who subsequently handle the bird is another story altogether.

As a matter of fact there are two half-crown chickens produced in the course of twelve months, by those rearers who operate for an all-the-year-round output (which is the general aim of commercial producers); the one maturing on a rising, and the other on a falling market. The bird that is hatched early in April may possibly, when the season and conditions are favourable, grow and develop with sufficient rapidity to realise 2s. 9d. at the end of June; but in the majority of cases it arrives at the 2s. 6d. period early in July. Every slight delay will, however, still further depreciate its value, and in the ordinary course the rate declines to the low level of 2s. by the end of that month. The striking of the half-crown period in the summer with any considerable head of chickens hatched in the spring is a very uncertain undertaking, and although earlier hatchings produce birds for the 3s. 6d., 3s. 3d., and 3s. periods, climatic vagaries and a possible extension of rearing have to be reckoned with; just as, on the other hand, every week that is lost after the half-crown level has been passed is depreciatory to value.

Moreover, the chicken which might reasonably, from the rearers' point of view, have realised the summer half-crown, is too often put back for another fortnight by the higgler upon the pretence of inferiority of size; or maybe the higgler is hay-making and neglects to call at the 2s. 6d. time—either manœuvre saving him threepence per bird in actual cash, and two or three weeks' gain in size. In such manner the advantages of rearing at a time naturally appropriate are often fully counterbalanced by the artifice natural to higglers. The haggling of the higgler invariably becomes more persistent at the time when the relatively unremunerative character of the London demand coincides with his

own haying and harvesting operations. It is his season of independence.

The other half-crown chicken, incubated some time in October, matures under another and opposite set of circumstances, when it is the rearer's comparatively happy lot to be in some measure the independent party in transactions with the higgler, and when he does not at any rate suffer the disadvantage of risk of depreciation on account of the possible lengthening of the rearing period. Chickens hatched during this month are, unless the weather is exceptional, somewhat less easy to keep growing without those checks which are so fatal to profit in production for market; and provided the progress is continuous, though slow, it is seldom that any considerable number reach a suitable condition for fattening in less than sixteen weeks. In most cases therefore they begin to mature at the half-crown period, which covers the first half of February, and very few autumn and winter reared birds make more rapid headway. The rearer at this period has, however, one important advantage, in comparison with his position at the time of the summer half-crown value, in that his birds will reach a suitable size and age when the market for lean stock is steadily rising; so that broadly speaking the value of his chickens will increase by threepence for each possible fortnight of additional feeding, and the ultimate value will at any rate practically balance the increased cost of production.

As regards the different rearing periods, the half-crown chicken raised in the spring has numerous natural advantages that are more or less wanting in the case of the autumn-hatched bird; nevertheless, if the latter makes a favourable start before the severe weather sets in, it is easier to keep it growing (even if the rate of progress be slow) than it is to commence rearing the 3s. 6d. bird in the depth of winter. When due allowance is made for the probable increased cost of feeding, and the seasonable losses and general drawbacks, it will usually be found that, although the individual profit on the 3s. 6d. bird may perhaps approximate to double that on the half-crown chicken, yet that on the latter will be greater in the aggregate. It must be further noted that the 3s. 6d. period is only of short duration, so that although the autumn-hatched half-crown bird comes in on a rising market, the intended 3s. 6d. chicken that suffers any check must risk a falling one.

As a matter of fact the rearer with serious commercial intentions rears at all seasons, for all periods of demand, and comparisons are not always reliable

or of general application, yet, making due allowance for exceptions, personal experience and observation tend to the conclusion that an all-the-year-round rearer does not make any very considerable proportion of his annual average profit out of the birds he succeeds in selling at the highest prices, and that all things considered the medium-priced chicken is a more remunerative production in the long run.

We are now more immediately concerned with the half-crown chicken, the production of which commences with the current month. It is, of course, hatched at an unnatural time of the year for incubation, and reared in face of steadily increasing adverse conditions for regularity of growth and development (and sometimes mere existence); but demand and competition compel us to do much that is artificial in our methods of production. Having under domestication evolved hens that will produce eggs at an unseasonable period, the skill of the breeder is involved in the due fertilisation of such eggs for his purpose; and mere fertility is not sufficient, it must be adequate to the occasion, and eggs for October incubation must necessarily contain vigorous germs and be capable of producing sturdy chicks possessed of hardiness and constitutional soundness. Not only must the ancestry be suitable, but the immediate parents must be in a fit breeding condition. For the present purpose the most reliable hens are those which reared chickens in the early summer, and have, subsequently, moulted and recovered condition; such will have benefited by a long rest from egg-production, and, other factors being equal, should be fit for mating with a male bird of last year's spring hatching, who has been sufficiently penned apart from the hens, and is also in good breeding condition.

It is by the neglect of this separate and suitable autumn mating that so many otherwise practical breeders ignorantly or carelessly increase the difficulties

of rearing in the fall of the year, and the attempt to continue production by the use of stock whose vitality is impaired by lengthened, and often permanent, mating has given rise to unreasonable prejudices regarding autumn-hatched chickens, whose delicateness is assumed as essential.

With the hatching of the sturdy prospective half-crown chicken the uphill fight of rearing commences, but the adoption of a method of feeding best calculated to encourage steady growth and development is to win half the battle in advance. The food must be suitable for the production of the desired result, at a cost commensurate with the final value; but irrespective of comparative prices, the best food in the long run is the cheapest for such production. Inferior foodstuffs merely lengthen the period, without finally producing an equal condition. As at all seasons, soft food is necessarily the most suitable for the purpose of table production, with Sussex ground oats as the chief ingredient; but the partial use of the dry-feeding method is often helpful when the weather is at all unpropitious, chiefly as an incentive to activity when the birds are sheltering and are thus better employed than running continually on wet grass.

The aim is now, as always, not only to hatch but also to rear to a suitable maturity the highest possible percentage, because it is in the aggregate that the profit mainly consists in comparison with such chickens as are actually reared for the higher prices; and a more than reasonable rate of mortality necessarily seriously affects the *pro rata* cost of the survivors. Under the manage-

ment of experience, however, the half-crown chicken — whether of spring or autumn hatching—is, at any rate, sufficiently remunerative to encourage production with a more reasonable expectation of success than is usually attained in preparation for the 3s. 6d. period.



A SPECKLED SUSSEX HEN.

[Copyright.]



JAMES MURRAY, M.P.

*Chairman of the First Departmental Committee on Poultry-Rearing in the United Kingdom.
[By kind permission of the "Bon Accord," Aberdeen.]*

WHO'S WHO IN THE POULTRY WORLD.

THE MARCHIONESS OF SALISBURY.

(See *Frontispiece*.)

NO name has stood more prominently forward during recent years in connection with the poultry industry than that of Lady Salisbury, who, as president of the National Poultry Organisation Society since its inception in 1898, has given unreservedly of time and means to the promotion of the work of that society and, therefore, of poultry-keeping generally. Her ladyship combines high social position with determined but quiet pursuit of any object in view, and it is freely admitted that the present position of poultry-keeping on utility lines is largely owing to her efforts and influence. Those who are associated with Lady Salisbury in committees speak most warmly as to the ability shown in her conduct of meetings and her clearness of view. Lady Salisbury is also president of the Hatfield branch of the N.P.O.S. and was president of Section E at the second National Poultry Conference at Reading in 1907. She is now Lady-in-Waiting to Her Majesty Queen Alexandra. She is the daughter of the fifth Earl of Arran and in 1887 married Viscount Cranborne, who succeeded to the marquise of Salisbury in 1903.

MR. JAMES MURRAY, M.P.

(See *Page 25*.)

WE have pleasure in giving a portrait of Mr. James Murray, M.P. for East Aberdeenshire and Chairman of the Departmental Committee appointed in July last by Mr. Sinclair, Secretary of State for Scotland, to investigate and report upon poultry rearing and marketing of poultry produce in the Highlands and Islands of Scotland.

Returned unopposed at the bye-election in 1906, occasioned by the death of the late Mr. James Annand, Mr. Murray has since then bestowed in many directions an exuberant interest marked with an inimitable activity and tenacity of purpose.

His patronage and guidance in the domain of art—as well known as it is valued—would seem to be eclipsed by his precipitate yet welcome help in the development of poultry husbandry in the northern part of these isles.

When the beginnings of the Departmental Committee come to be officially announced it will be found that to him may be ascribed the inception of much-needed Governmental interest and assistance in a hitherto neglected, yet by no means unimportant, branch of agriculture.

His interest in poultry-keeping, however, ends not there. Early this year he gave the handsome donation of £250 to the Governors of the North-East of Scotland Agricultural College, Aberdeen, to enable them to pursue experiments of value to local poultry breeders and to equip the college as an educational centre

of up-to-date information bearing upon the industry. It may confidently be hoped that Mr. Murray's labours as Chairman of the first Departmental Committee on Poultry Rearing in this country, as well as his spontaneous and liberal gift to the Aberdeen College, will, in their results, be eminently successful, and thus bring to him the highest possible reward of public spirit, energy and liberality—the satisfaction of witnessing the work prospering in his hands.

COLONEL SANDBACH.

(See *Frontispiece*.)

THERE is no more familiar figure in the poultry world than Colonel Sandbach. One of the keenest of fanciers, he has kept most of the known breeds of poultry and, it must be said, left them the better for his handling. But not only have the Hafodunos yards been noted for the excellence of their more modern stock, but for a great number of years the Colonel or his father devoted much time and money and instinctive skill to the breeding of farm live-stock in general. In all the principal shows in the kingdom, from the Dairy downwards, the Hafodunos sheep and cattle were conspicuously stamped with the hall-mark of good and patient breeding, and invariably captured a lion's share of the prizes. But during more recent years Colonel Sandbach has gone in most extensively, as all the world knows, for poultry. Buff and Black Orpingtons, Partridge Wyandottes, Plymouth Rocks, Buff Leghorns, Lakenfelders, Aylesbury ducks, Runner ducks, Embden and Toulouse geese, and mammoth Bronze turkeys are among the many breeds that have enjoyed distinction at Hafodunos. But perhaps it is in Buff breeds that Colonel Sandbach has been most successful, many notorious winners having been turned out by him. Partridge Wyandottes, too, he has been particularly partial to since their inception, and the club catering for that variety has found the Colonel a most ardent supporter. And although Colonel Sandbach is such a keen fancier, the utility side of the stock is never overlooked. He is entirely in sympathy with the objects of the U.P.C., and, if memory serves us right, won second place in the Laying Competition of 1906-7.

Last year Colonel Sandbach was elected chairman of the Poultry Club by a large majority, and the honour could not have been more richly deserved. Owing, however, to the great distance from Hafodunos to London to attend the club's meetings, and to the great tax upon his time, Colonel Sandbach, before his year of office had passed, felt that he would have to tender his resignation. That, however, as might be supposed, was not accepted, and he was persuaded to retain the presidency. About the same time it was announced that the bulk of the stock at Hafodunos was for sale, and although a goodly number of the birds has changed hands, there are still from 300 to 400 most promising chicks of the breeds mentioned.



THE FANCY SIDE OF POULTRY CULTURE.

By W. W. BROOMHEAD.

IT is an irrefutable fact that the poultry industry of the British Isles is an important and increasing one. And it is equally true that the poultry Fancy, from a commercial point of view, is a much better asset than is dreamt of by the majority of poultry keepers. One cannot ignore the fact that this country does not supply its own requirements in the poultry line, and many millions of pounds are annually paid for the importation from foreign parts of poultry and eggs for edible and other purposes. But, as many of those imported commodities are classed as low-grade and are used in trades and manufactures, the question naturally arises, Would it be profitable to produce them here?

More than one well-known poultry authority has proved conclusively that it would be impossible for poultry keepers in this country to produce eggs and poultry profitably to compete successfully with the low-grade stuff. It is for this reason, therefore, that fanciers have considered it best to leave the supplying of such things to the foreigner and to aim at something higher—something which will give them a more satisfactory return for their outlay. And the result is that to-day thousands of people are turning their attention to the poultry Fancy.

Poultry-farming pure and simple has rarely been found successful in this country; and unless there are some very drastic and unforeseen changes, it probably never will pay the rent and taxes, labour, depreciation, food, and other bills, and leave a fair income independently of other stock. The industry of utility poultry farming might support its workers; but it will never yield sufficient surplus to satisfy expectations nor to guarantee a large outlay of capital. Commercially considered, poultry keepers do not lose by the great importations; on the other hand, they gain, since their energies may be directed to the culture of fancy poultry.

There can be little doubt that the Fancy aims for the good of the whole poultry industry. By main-

taining pure breeds of poultry, and chiefly through the medium of exhibitions, the properties of table birds have been vastly improved; and the almost limitless number of fanciers throughout this country, as a matter of course, has enormously checked the influx of foreign eggs. Whatever may be one's private or individual opinion of the merits of fancy or utility poultry, exhibitions of our domesticated breeds during the last quarter of a century have increased tenfold. And such is the demand for poultry shows that in 1907 no fewer than seven hundred and seventy-three were held in the British Isles. Then, again, during the past twenty-five years more than thirty distinct varieties and sub-varieties have been placed before the public; and there is no reason to suppose that the limit in that direction is yet reached.

It must not be forgotten that the original intention of awarding prizes at shows was, as, indeed, it is now, to encourage the breeding of high-class specimens and to induce people to take up such an engrossing hobby. For, let it be remembered, the Fancy is, first and foremost, a hobby. The keeping, breeding, exhibiting, selling, and buying of fancy fowls form a most interesting and pleasant change from the worries of the business man, and also provide a source of pleasure for those who, after a busy life, require some innocent excitement to drive away ennui. Fanciers are drawn from every sphere of life; and probably no hobby provides so great an opportunity for the combination of pleasure and profit as the keeping of a few fowls.

The spoliation of breeds is a term which has frequently been used in connection with fanciers and their methods. In certain sections of the community there is a prevalent idea that by breeding poultry to a standard of perfection such as is adopted by the Fancy it must necessarily impair the useful properties of a breed. This is, however, in a great majority of cases, a mistake. In a few instances, when the type and plumage aimed at are hardly favourable to utility, the bird may become less useful; but, generally speaking, the fancier's objects are towards the development of useful properties. Certainly, the fancier's chief aim is beauty, and not "utility," as most of us to-day understand the latter word; but both objects usually run together.

Twenty-five to thirty years ago such breeds as Brahmas, Cochins, Dorkings, Game, Hamburgs, Polish, and Spanish were considered the best kinds to keep, some of them for laying qualities and others for the production of table fowls; but few of those breeds are now kept to any extent in this country. And why? Is it fair to saddle the fancier with their decline in popularity? If it is true that they were exceptionally good utility breeds it would surely not have been a difficult matter for the utilitarian to have kept them in the front rank all along. But when compared with the breeds that have been brought out since the 'seventies they have been found wanting, and in course of time have had to give place to their betters. And to-day there is a much wider range of truly useful and profitable varieties of poultry, thanks to the fancier, than existed when the Spanish breed was so popular as a layer.

The fancier has been blamed for bringing out new varieties; but despite the fact that they are being bred to "feather," they are all useful from a strictly utilitarian aspect. And what is perhaps of more importance, they induce people to become poultry keepers, and thus help to swell the ranks of the ever-increasing army of those whose fancy lies in the direction of poultry. Shows that give encouragement to the fancier have been condemned for working hand-in-hand with him; but poultry fancying and showing have been of the utmost value in encouraging a desire for pure-bred stock. Without such a stimulus the great improvement which is seen in the size and quality of many breeds would never have taken place. People would not be sufficiently enthusiastic to look forward to the far-off end of the general improvement of poultry as a marketable commodity had they not meanwhile some present diversion from and interest in the pursuit of breeding.

It has been said that in 1907 there were seven hundred and seventy-three exhibitions of poultry. It may be taken at a low estimate that the average entry at each event was one hundred birds. Now, every bird bred in a fancier's yard is not fit to show; but, supposing that one in twenty comes near enough to the standard to warrant its being exhibited, the reader can readily imagine the great number of birds which have to be bred to keep up the shows. In this case it would be well over a million and a half. Presume that half the birds are pullets and that each averages one hundred and twenty eggs per annum. People do not kill pullets as a rule, whether they be show birds or culls; they are kept for laying, no matter how faulty is their plumage. At the lowest computation, therefore, through exhibition breeding, the country is the richer by over ninety million eggs annually. Let it be emphasised that the foregoing estimates are low. But even then it will be seen how fancy poultry-keeping tends to check the influx of foreign eggs. Then, what becomes of all the cockerels which are neither good enough for exhibition nor suitable for stock purposes? They are sold off for market at killing prices.

That is not all, however. The fancy side of poultry culture does good in other ways. Considered purely as a hobby, it provides a healthy and innocent amusement to hundreds who need such to relieve the monotony of life or of labour, because fanciers are

drawn from all classes, from the peer of the realm down to the artisan or dock labourer. Then, again, from a commercial standpoint, hundreds of appliances are called for annually, and so there has grown up, through the keeping and breeding of exhibition poultry, a big industry in the appliance line, employing thousands of workpeople in their manufacture. The timber trade is better thereby; the corn trade is improved; railway companies command a good revenue from the fares of visitors and from the carriage of birds to and from the exhibitions; halls and local houses make a profit at show times. The Government gets a haul in the thousands of postal orders that pass annually. In fact, it is difficult to say where the great influence of fancy poultry ceases. And there can be little doubt that the country would be a vast deal worse off without fanciers, both in the matter of eggs and table fowls, and in that of finding work for thousands now profitably employed in something or other connected with the fancy side of poultry culture.

LEGHORNS, Past and Present.

By L. C. VERREY.

THERE is no doubt that, of all the Mediterranean races of poultry, the Leghorn has always taken pride of place in public estimation on account of its sterling qualities and economic properties, which, though more prominent in the original specimens, are still apparent in the present generation, despite the fact that all and each of the varieties or colours have been more or less adulterated by the infusion of alien blood. The true Leghorns were small birds, the hens non-sitters and, consequently, prolific egg producers, two very important qualities which have unfortunately decreased in the course of years, owing to the breed having been cultivated for feather markings and other exhibition requirements. These qualities could only be obtained by the crossing in of breeds of poultry which, while possessing certain points which harmonised with those of Leghorns, were yet of different construction. The effect of this amalgamation has been to alter the type to a certain extent and also to lessen the egg-producing powers of the hens. In foreign lands, where the worth of the fowls for their productiveness has been, and is still, the primary object, the Leghorn of to-day is just as good a layer as was its ancestor of generations ago, conclusively proving that when kept pure and unadulterated its productiveness retains its reputation.

We, in England, are indebted to America for furnishing us with the foundation of our stock of Leghorns in the brown and white varieties, while we in return have supplied America with nearly, if not all, the minor varieties of the breed. Although our friends on the other side of the Atlantic have left the manufacture and development of these sub-varieties to us, they have been far more consistent in maintaining the original characteristics and type of the

browns and the whites, so that these two colours in America to-day far more resemble the original and true Leghorns of Italy than do the birds bred and exhibited in this country.

The first Leghorns imported into England were what would now be considered "very small," but at that time they were classed as "medium" sized. In these original Leghorns the cocks' combs were straighter, more upright, and, though rather thin, were of finer texture and smaller size than what is now considered the orthodox comb. The lobes were of almond shape and of moderate size, and the face was sound

larly smart and alert carriage and great activity in their movements, attributes always indicative of prolific egg production. Most of the above points still exist in the Leghorns bred in America and Denmark, which clearly shows that the cultivation of the breed has been pursued on consistent and systematic lines with the view of perpetuating the essential qualities with which nature endowed it. In their native land, Italy, the Leghorns of the present day remain of the same type and stamp as the birds of ages past, because the sole object for which they are bred is egg production. Several countries in



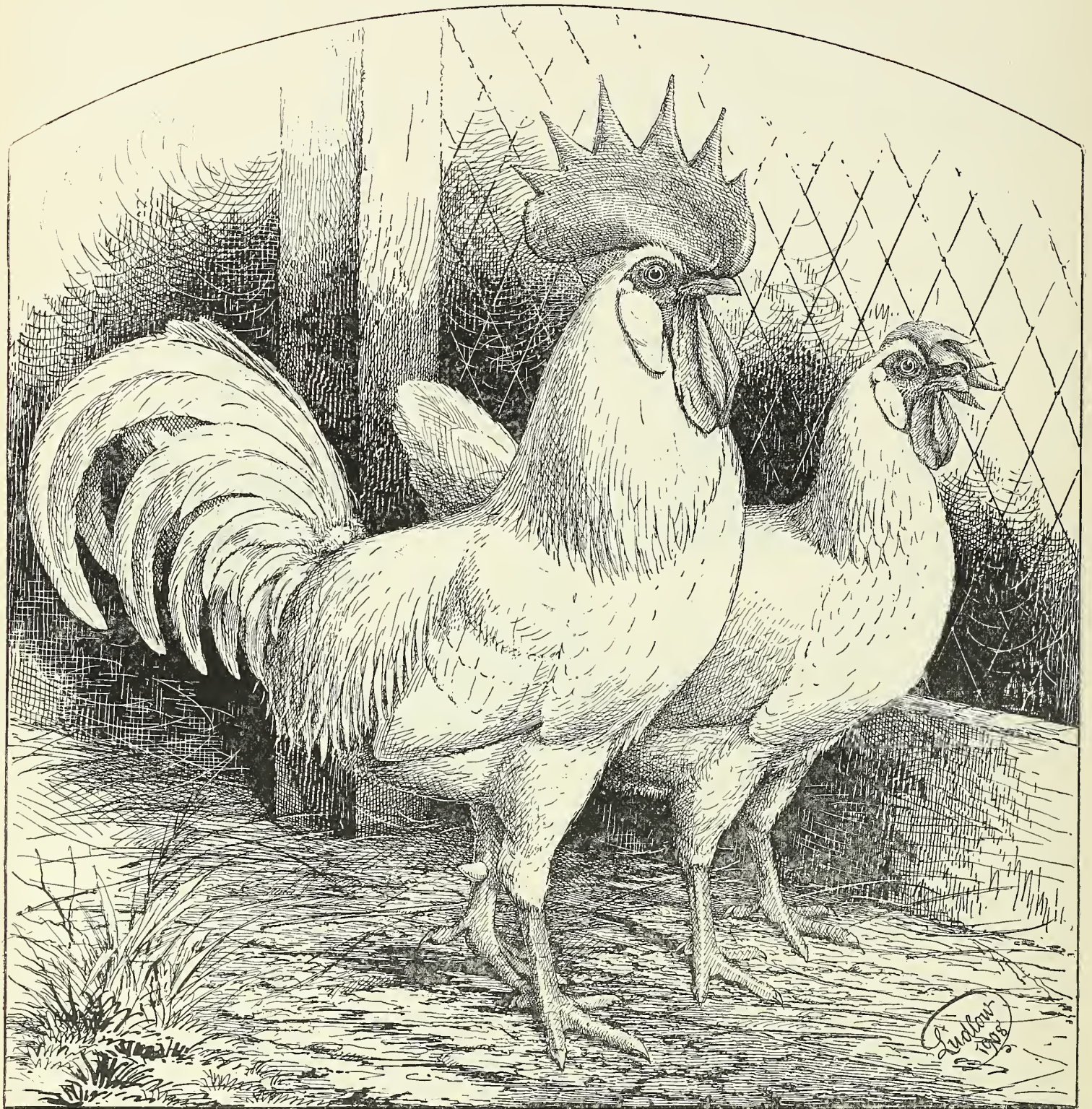
DANISH WHITE LEGHORNS.

The property of College Poultry Farm, Theale.

red. The back was of moderate length and slightly rounded, the breast full and carried well forward, the tail large, carried high and with fine flowing sickles, the legs were rather slender. The hens were perhaps smaller in proportion, though not much. Their combs were of fine texture and rather thin substance and bent over gracefully to one side, but did not fall low enough to obscure the sight of either eye. Lobes of moderate size, fitting fairly closely to the head. Neck nicely arched, breast full and carried well forward. Tails rather large and full and carried well up. Two characteristics common to both sexes were particu-

larly smart and alert carriage and great activity in their movements, attributes always indicative of prolific egg production. Most of the above points still exist in the Leghorns bred in America and Denmark, which clearly shows that the cultivation of the breed has been pursued on consistent and systematic lines with the view of perpetuating the essential qualities with which nature endowed it. In their native land, Italy, the Leghorns of the present day remain of the same type and stamp as the birds of ages past, because the sole object for which they are bred is egg production. Several countries in

Europe import many thousands of these "Italians" (as they are called) annually, for the same purpose. Denmark is perhaps the country where they are most largely cultivated and, though exhibitions of poultry are frequently held in that land, the original type and characteristics of the breed are still maintained. Having described in a general way what the original Leghorns were like, it will be easy to see how greatly the present-day show birds differ in nearly every point from them and what wonderful changes have taken place during the past quarter of a century.



ENGLISH WHITE LEGHORNS.

The property of the Worcestershire Poultry Farm Tardebigge.

By the mandate of the Fancy, Leghorns must now be as large as possible and of massive build (especially the white variety), the comb of the cock very large and of thick substance, appearing in some cases to be so large and heavy as to be out of proportion to the head which has to support it. Lobes as large and pendant as possible, in fact more nearly approaching the style of lobes of the old black Spanish than those of the true Leghorn. The back sloping to the tail, breast with very little fulness, tail and sickles of only moderate proportions, sometimes inclining to scantiness and carried at a low angle, legs and shanks decidedly long. The pullet long in body, tall on the legs, with almost a whip tail carried rather low. Comb large and thick, which in some specimens falls flat over one side of the face and quite obscures the sight of one eye.

Though the whites have suffered most in alteration of type, the other varieties have not escaped the desire for increased size of body, comb, and lobes. The abnormal development of these points, for they are abnormal when compared with the original true Leghorn, has resulted in the loss of that sprightly activity once so characteristic of the race.

In the early days of Leghorns in England there were only two varieties or colours, viz., the brown and the white, which for some years held the sway, and then by degrees came the introduction of blacks, cuckoos, and buffs. Birds of all these three colours can be found among the flocks in Italy, uncontaminated by the infusion of alien blood, but since their advent here many experiments have been tried to improve colour, size, feather markings, and head points, until now they differ very considerably from their brethren of the sunny South.

Duckwing and pile Leghorns are entirely of British manufacture, the former containing a very large proportion of alien blood in its veins, while the latter owes its origin to a cross between the browns and whites. Partridge Leghorns are being bred on a limited scale, but it seems rather doubtful if they will ever be seriously taken up.

The latest addition to the Leghorn circle is the blue, which is quite a home production and at present far from being complete in its construction, the lacing of one of its foreign ancestors making itself unpleasantly prominent now and again.

In conclusion, it appears as though the time has arrived when this renowned Mediterranean race should be divided into two sections so as to avoid confusion, the one to be known as "Italian" Leghorns and the other as "English" Leghorns. In the case of the Game fowl such a division had to be made, with the result that the "Old English" and the "Modern" are now thoroughly recognised as distinct. The "Italian" Leghorns should include only such primary coloured varieties as are recognised in Italy and be of medium size with very alert carriage, while the "English" section should embrace all the colours now existing and also any other varieties that may be manufactured in the future, regardless of the exacting laws of type and carriage. For as matters now are, the inclination of breeders is to over-ride and change the general contour of one of the best races of poultry that was ever created.

NOTES ON EXHIBITIONS.

IT is hardly possible in a magazine of the nature of THE ILLUSTRATED POULTRY RECORD to give in anything like a detailed manner a criticism of the "thousand and one" poultry exhibitions which are held in the British Isles during the course of a twelvemonth. Some idea of the number of shows which take place during the season may be gained from the fact that from September 1 to 26 there were no fewer than sixty-seven events, and most of them were by no means small affairs.

The month's fixtures opened with one at Clowne, Derbyshire, and another at Aughton, Cheshire, on the 2nd, and at both shows there were more than fifty classes scheduled for poultry. The next important event was at Skipton, Yorkshire, on the 5th, on which day, it may be mentioned, there were nine other exhibitions in different parts of the country; and here again there were more than fifty poultry classes, while the prize-money was twenty shillings first, ten shillings second, and five shillings third.

Despite this "clashing," however, the entry at Skipton was a fairly good one, and some of the most noted fanciers' establishments in the country were represented. But this is not surprising since the fixture, for some years, has been classed as one of the principal summer shows held in Yorkshire, and one of the most important chicken exhibitions of the year. On the same day, too, the 5th, a good show was held at Milnathort, Kinross-shire, at which there was a very representative display of young birds, although the classes for adult poultry were not over-burdened with entries.

The oldest poultry show in the British Isles, and possibly the oldest of its kind in the world, was held at Wolsingham, in county Durham, on the 9th, while on the following day there was an important show at Okehampton, Devon, which is one of the most popular poultry exhibitions of the West country. The former event was held under the auspices of the Wolsingham and Wear Valley Agricultural Society, which is now in its 146th year. As the classification, as always, was good, some meritorious exhibits were penned, although the entry was somewhat lower than that at last year's event. At Okehampton there was an excellent display of West country birds, and it is safe to say that the Fancy in those parts is in a very healthy condition.

The biggest, and probably the best, display at the September events was that which took place on the 17th and 18th at Haywards Heath, Sussex. This is a poultry show purely and simply, and no fewer than 142 classes were put on. Moreover, £420 were offered in prizes, and of the numerous special prizes there were eighteen champion cups offered for competition, so it may be taken for granted that the quality of the birds was of the very best. It has truly been stated that Haywards Heath is a good exhibition at which to test the value of the season's chicken "crop," and it acts as a reliable trial run for the Dairy Show, specimens winning at Haywards Heath being almost certain to give a good account of themselves at the later event. Sixteen specialist

judges were engaged and the entry was most satisfactory.

The last of the most important exhibitions of September was that which was held at Altrincham, Cheshire, on the 23rd. This is an event which embraces all the sections of minor fancy live stock, and the recent show included 102 classes for poultry, 181 for pigeons, 36 for rabbits, 10 for cats, and 26 for cavies or guinea pigs. The amount offered in prize-money was £1,900. Altrincham Show is, without doubt, the greatest one-day exhibition of the season, and it is so popular that it probably stands without a rival in the matter of gate money.

October will be a busy month in the show world, and although about forty fixtures were announced up to the time of going to press, that number will no doubt be exceeded ere the month terminates. The most important event will be the ever popular "Dairy" at Islington, London, N., which is to take place on the 6th, 7th, 8th and 9th. The classification for the show is on rather more extensive lines than formerly, and in the poultry section the total is 255, which, compared with that of 1907, is an increase of about twenty. Leghorns and Wyandottes are fully catered for, each breed getting sixteen classes, including two each for blue and cuckoo Leghorns. Orpingtons get twelve classes, of which two are for the recently introduced cuckoo variety. There are eight classes each for Cochins, Modern Game and Plymouth Rocks, seven for Old English Game, and six each for Hamburgs and Sussex. Bantams get forty-four classes, ducks twenty-one (including two for Buff Orpingtons, quite a new breed and a useful one too), geese four, and turkeys six, while there are fifteen classes for table poultry. Twenty-four specialist judges have been engaged, so there is no question that the show will keep up the grand reputation it has gained in the "Fancy."

Another important event will be the Edinburgh and Midlothian Poultry and Dairy Exhibition, which is to be held in the Waverley Market on October 7, 8, and 9. Endeavours have been made occasionally to hold a large annual poultry show in Scotland, but so far they have not met with a great amount of success. There is no reason to doubt, however, that the forthcoming affair will have any other than a very satisfactory ending, and it is to be hoped that it will be the first of many similar events, since Scottish fanciers are sufficiently numerous and enthusiastic to support a show providing a generous classification. The schedule is probably the most up-to-date ever produced in Scotland, while the classification is the largest. It includes 119 classes for poultry, of which 32 are for bantams; and of those for large breeds 8 are devoted to Wyandottes, 6 each to Orpingtons and Hamburgs, 4 each to Scots Greys, Game, Dorkings and Leghorns, and 15 to utility poultry and eggs. Three hundred pounds are offered in cash prizes, and there are one hundred specials.

Manchester Show will also be held in October, on the 20th, 21st, and 22nd, at Belle Vue Gardens, and there will be a big exhibition at Morecambe, Lancs, on the 28th and 29th, while a special show of game fowls is announced to take place at Kendal on October 29 and 30. Other important fixtures which are announced for October are those at Nottingham on

the 2nd, Beith, Ayrshire, on the 3rd, Exeter and Frome on the 14th, Leamington on the 15th, Eastbourne and Liskeard on the 21st, Weston-super-Mare on the 22nd, and Galston, Ayrshire, on the 31st.

Forty-four shows have been arranged for November, and they include Kendal, Westmorland, on the 4th and 5th, Carmarthen on the 5th, Bristol on the 11th and 12th (an important club meet), the Grand International at the Crystal Palace on the 17th, 18th and 19th, Lord Tredegar's at Newport, Monmouth, on the 24th and 25th, and Carlisle on the 25th and 26th, while the first show of the Ladies' Poultry Club will take place at Reading on the 25th.

The Birmingham Fat Cattle Show (an important one for poultry fanciers) opens on November 28 and runs into December, while during the latter month there will be important fixtures at York, Redhill (Surrey), Leeds, Dublin, and Plymouth; but more of these events in a later issue.

We will publish a general résumé of the poultry section of the Dairy Show in the November issue.

NOTES AND NEWS.

Those readers of THE ILLUSTRATED POULTRY RECORD who are interested in the doings of the Poultry Club are no doubt aware that the council of that body has recently decided to allow chickens, at exhibitions held under Poultry Club rules, to compete on a better footing than has hitherto been the case. In former years it had been the rule to confine chicken classes to birds hatched on or after the first day of the year in which the show was being held. And since at most of the exhibitions of the early summer, at which chicken classes were provided, size or forward growth was apparently the chief point considered by the judges, it was thought in certain quarters that such a plan was apt to induce unscrupulous breeders to hatch their birds in the previous autumn or early winter and show them as chickens of the year.

Endless rings, supplied by the Marking Conference and issued after March each year, were in vogue; but it has been proved that those rings are not very serviceable. Consequently the Poultry Club Council, at the recommendation of a special sub-committee, which went thoroughly into the question from a practical standpoint, has decided to abolish the rings and remove any fixed date for hatching. And in future the supreme test of chickenhood will be the general handling of the bird, the softness of its bones, and the pliability of its pelvis bones. It is worth mentioning, however, that at the chicken shows of next year those gentlemen who are responsible for the compiling of the schedules should, if their events are to be held under Poultry Club rules, make it clear that chickens need not be confined to 1909 hatched birds. This can easily be done by marking the classes cockerel or pullet, as the case may be, and omitting the words "hatched in 1909."

Among the numerous specialist breeders and exhibitors of fancy poultry in this country none is perhaps better known, and certainly not in Leghorn circles, than Mr. L. C. Verrey, of "The Warren," Oxshott, Surrey; and as a fancier of one variety of fowl his name is now a household word. For the past quarter of a century or so Mr. Verrey has been breeding Brown Leghorns, and since he has done so in no haphazard manner and his poultry are purely and simply his hobby, it is not surprising that he has reached the top of the tree in his particular line. Not only is the "Verrey" strain of browns renowned for its general excellence, but the pullets are of a particularly soft colour—a most difficult point to obtain—and the male birds excel in hackle-striping and soundness of plumage. Mr. Verrey had the misfortune, a few weeks since, to have some of his most promising birds of this season's hatching stolen; and as the fowls were, in all probability, taken for edible purposes, it was all the more annoying. But there are sufficient good specimens left at "The Warren" to keep up the high reputation of the yards, and even as early as this in the show season some have been exhibited and gained first prizes and cups.

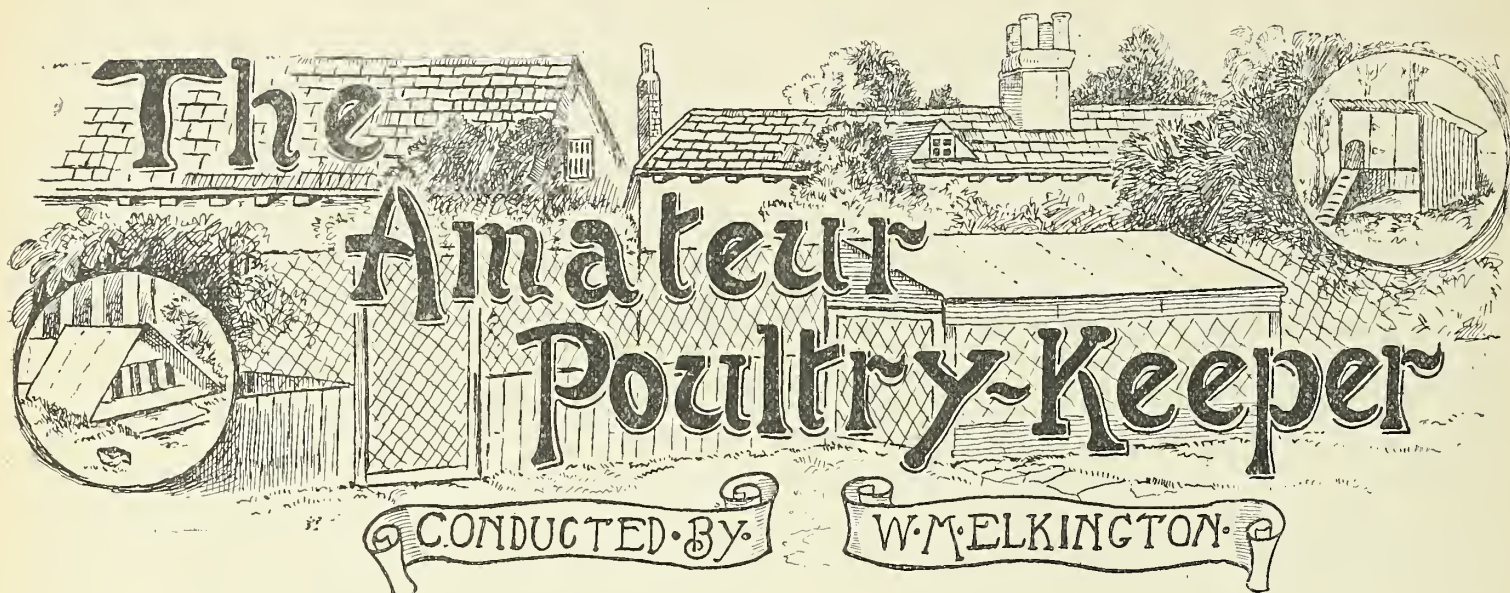
Another well-known Leghorn fancier is Mr. G. Tyrwhitt-Drake, of Sandling, Maidstone. Mr. Drake keeps all varieties of the breed, even including the latest addition to the family, viz., the blue. He is, too, a most successful exhibitor, and during the past three or four seasons he has won more prizes with Leghorns than any other fancier in this country. Needless to say, the fowls are well tended and the establishment is in every way up-to-date. The houses are commodious and the ranges of good extent, and not the least imposing building at the Cobtree poultry yards is the large exhibition house erected specially for training the show specimens. Not only is Mr. Drake an exhibitor, but he has much to occupy his time as hon. treasurer and secretary of the Poultry Club and as secretary of the Mid Kent Agricultural Society; and, moreover, he has a dairy farm of some five hundred acres and a herd of seventy milch cows. It is not surprising to hear, therefore, that he employs a professional poultryman to help him with his fowls.

One of the oldest poultry establishments in the south is that owned by Mr. Richard W. Webster, of Maidenhead and, although he is now too much occupied in another direction to go in so extensively for poultry as he used to do, he still keeps prize fowls. The breeds at present reared at Littlewick Green are Minorcas and Brahmas, with which Mr. Webster has made a name in the poultry Fancy. Of the Minorcas, both the single-combed and the much-boomed rose-combed varieties are kept, while of Brahmas the light is the chief. And Mr. Webster tells me that the past breeding season is the best he has experienced for some years with his Brahmas. Utility and exhibition poultry have been farmed extensively at this Maidenhead establishment, and both branches have been carried on in a successful manner.

Of Buff Orpington fanciers, and they are, without doubt, much more numerous than any others in this country, one of the most successful, considering the practically short time he has been in the Fancy, is Mr. Edward A. Cass, of Candlesby House, Burgh, S.O., Lincolnshire. It is not more than six years since Mr. Cass went in seriously for fancy fowls, although he was at one time a breeder in an extensive way of American Mammoth Bronze turkeys. He is a staunch believer in scientific breeding, and it is due solely to his great care in selecting and mating his stock birds that his strain of Buff Orpingtons has been bred to a high state of perfection. Mr. Cass has not been exhibiting his fowls this season; but two or three fanciers who have commenced with his strain have been very successful already this year.

Probably the finest and most complete collection of Old English Game fowls and bantams bred for the show-pen is that which is to be seen at Coombe Abbey, Coventry, and is owned by the Countess of Craven. In Old English Game there are really two distinct types, even for show purposes—the one heavily feathered, with profuse hackles and tail and short shanks, and the other more of the "pit" stamp (the type that made Englishmen famous as cock-fighters in the old days), showing more thigh, having shorter neck-hackles, and being altogether more sprightly and "fiery." It is the latter type which the Coombe Abbey birds mostly favour, and as they are attended to by one of the best Game fanciers living and are under the supervision of Mr. W. Spicer the birds are, of course, kept fit, which is a great point in their favour from an exhibition standpoint. It may be said that Old English Game are becoming more popular than they have been for some time. They have, of course, flourished for centuries in the Midland and Northern counties, where, although it is not generally known, numbers are bred each season purely for sporting purposes; but during the past three or four years the breed has been taken up to a greater extent for exhibition purposes.

At one time it was considered that Indian Game—Cornish Indian Game as they are sometimes called—could not be successfully bred except in the south-west of England. But two or three exhibitors have long since proved this to be a fallacy and one of the best examples is the fact that the brothers Firth, of Acton Vale, London, have held their own with Indian Game in the keenest competition. Messrs. Firth's birds are not now kept at Acton, since their range has been acquired for the extension of building operations, but they are located at special farms near Essendon, Herts, and Coulsdon, Surrey. Not only are Indian Game charming birds from a fancy point of view, but they are of great service for utility purposes, and for the improvement of table qualities the male birds of this breed are not to be excelled, the width and depth of their breast and absence of offal being all in their favour in this direction. And to prove that show strains are not to be despised for utility points, it need only be mentioned that Messrs. Firth Bros. dispose of numerous cocks and cockerels for crossing during the year.



What is an Amateur?

Although there is considerable divergence of opinion among show promoters and club legislators regarding the definition of an amateur, there will be little doubt as to whom this section will particularly appeal. There are thousands of people constantly taking up poultry-keeping, eager to learn more about their hobby and acquire a fuller knowledge of the elementary principles of breeding and management; others who have been in the Fancy long enough to discover some of the difficulties and disappointments that beset the path of the ambitious; and still many more who, though they may have mastered the elementary work, still cling to the amateur section for the reason that poultry-keeping is with them, first and always, a hobby pure and simple. To all these—to the tyros, to the probationers, and to the hobbyists—it is sincerely hoped that the amateur section of THE ILLUSTRATED POULTRY RECORD will constitute a source of amusement, instruction and encouragement.

Limited Competition.

Apropos of show matters, I have been asked to ventilate the subject of restricted competition for amateurs, or novices as they are generally called. One of my correspondents points out that limit shows are becoming more scarce and that the custom of providing novice classes at ordinary shows is falling into abeyance, as witness the elimination of the novice classes from the Crystal Palace schedule. It is true that some disappointment has been caused by the action of the Crystal Palace committee in ruling out novice classes as *infra dig.*, but with that exception I see no signs of any waning of the movement that has been steadily gaining force and that has for its main object the encouragement of the genuine amateur. Some of the more progressive specialist clubs have graduated novices into two classes: (1) those who have never won a first prize at a classic show, and (2) those who have never won a first prize

at any show. This policy might be pursued still further, and we might even give classes for those who have never previously exhibited a fowl. At any rate, the principle is sound, and I am convinced that the amateur movement will continue to make friends among those who realise how necessary it is to constantly recruit the Fancy with suitable material.

A Hint to Amateur Exhibitors.

Amateur poultry keepers who have a leaning towards the exhibition side invariably experience more or less difficulty in assessing the show value of their stock. Even though one may have studied the standards until one might be supposed to know the relative value of each particular point by heart, it is quite impossible to form an accurate idea of the bird's chances in the show pen until it is compared with other specimens of the same breed. For this reason, the amateur fancier will find it an excellent plan, when he imagines he has a good bird, to send it to a show where there are likely to be some good specimens penned, to visit the show in person when the judging is over, and compare his bird with each one that is placed above it. If the judge happens to be present, by all means obtain his candid opinion. A judge can tell you more about your bird's defects in two minutes than you would have discovered in as many months.

The Survival of the Unfit.

When I was travelling some little time ago with a gentleman interested in the poultry industry, my companion made the assertion that if all the poultry kept in this country were properly managed the national foreign egg bill might be reduced by one half. Whether or not this is an exaggeration, the fact remains that many thousands of fowls in this country are either of an unsuitable character or badly managed. First and foremost, take the number of old hens one sees about. The average small poultry keeper who has never

made a study of the subject appears to have a leaning towards old hens. He probably becomes attached to them and keeps them till they die, whilst all the time they occupy the place and eat the food that might be devoted to productive pullets. With only limited accommodation it can never pay to keep ordinary laying stock after the second season. Many people shrink from clearing the old birds out because they know they must sell at a low price and buy young pullets again at perhaps more than double the cost. However, this is inevitable, and if one would make the most of the old birds the plan I recommend is to kill them, when fat, steam them for about three hours, and then brown them in the oven. They are not quite like chickens, I admit; but they are tender and by no means an unsavoury dish.

Cheapness and Degeneracy.

But beyond the old birds, it is unfortunate that a great number of worthless, degenerate hens are kept in this country, due in large measure to the craze for cheapness, and I strongly advise amateurs not to carry economy in purchasing poultry to excessive lengths. I know there are a great many people who, probably because they have never been better advised, will look through the advertisement columns for the lowest quotation and imagine that the cheaper they can buy birds the better it will be for them. Whilst there are so many misguided people there will always be dealers to cater for them. Where these dealers obtain their stock from, and how the birds have been reared, would be too long a story for these pages. Suffice it that an astonishing amount of worthless, degenerate fowls are distributed in this way, with, in many cases, the seeds of an epidemic thrown into the bargain.

Instruction for Beginners.

In order that this department of the RECORD may be thoroughly helpful to amateurs, readers are invited to seek advice through our correspondence columns upon any subject. The educational value of such columns cannot be over-estimated, and we trust that readers will give us the opportunity of helping them to realise the best that is in poultry-keeping.

EGG PRODUCTION IN SMALL RUNS.

THE production of eggs for home consumption by means of a few hens kept in a confined run is a subject that cannot fail to appeal to many thousands of English people, not only in small towns and country places, but also in the more populous centres where suitable accommodation is available. I make this proviso because I have no desire to encourage the keeping of fowls in tiny back yards of densely populated districts by a class of people who cannot be trusted to ensure cleanliness. Medical experts have already pointed out the public danger arising from

filthy poultry runs close to human dwellings, and therefore, in considering this subject, one cannot lay too much stress upon the precautions that should be taken to maintain cleanliness.

I am referring more particularly to cases where not more than eight or nine hens are kept in a corner of a garden or, at any rate, in a very confined area, and in such instance it is most desirable to adopt the scratching

shed principle—that is, to cover in the run so that in all weathers the birds have a dry place in which to exercise. In such a run the composition of the floor is of great importance, and perhaps a recital of my own experiences in such matters may help to convince amateurs. At one time I tried to ensure perfect cleanliness by having in one case a gravel floor, and in another case a sanded floor, which could be raked over when necessary; but although these answered their purpose in one respect they provided very little opportunity for scratching exercise, and latterly I have discarded all others in favour of a plain earth floor with plenty of loose litter. In autumn and winter there are sufficient dead leaves to serve this purpose, and at other times a little short, rough straw is easily obtainable and will last for a week or two before it requires renewing. This question of renewal is governed by the number of birds kept and the extent of the run, but when the old material is removed the work should be done



A FRENCH AMATEUR'S POULTRY YARD (RUEIL). [Copyright.]

thoroughly, dust, droppings, and broken straw being removed together. With frequent renewals there is little danger to be feared from dust blowing about, since the covered sheltered runs are in themselves a precaution. The greater harm is to be feared from open runs, the floors of which become mud baths in wet weather and are dry and dusty in hot weather.

It is obvious that in these confined areas a few hens can only be kept in a healthy, productive state when attention is paid to all their requirements. They must have exercise, which is provided by the loose litter, among which the hard corn may be scattered. And they must have green food and animal matter in some shape or form, as well as grit and lime, all of which birds running at liberty may find for themselves. I have known some people to be remarkably successful in poultry-keeping of this character, whereas others have failed, and the difference between these results was entirely due to an understanding of the conditions under which fowls thrive in such circumstances, which knowledge is to be gained only by actual experience. Briefly, however, the principle is to give the birds such food, and in such quantity, as will keep them productive, to avoid over-feeding, and to encourage exercise to the fullest extent.

In small runs there is always a danger of overcrowding, and the amateur who extracts a satisfactory profit per head from half a dozen hens is frequently tempted to double the number of his stock in the belief that he will double his profits. As a matter of fact, however, it is more likely that he will halve or quarter the original returns, owing to the ill effects of overcrowding. Moreover, there is such a thing as economising in feeding, by utilising household scraps, which are very useful if given in a proper manner, and may possibly serve to reduce the cost per head of a certain number of hens by 50 per cent.; but above that number the cost per head must be proportionately greater and the profits consequently less.

With regard to household scraps, the best plan is to soak pieces of bread, vegetables, &c., overnight, and dry them off with sharps next morning. Meat should be cut up and given separately, and at least one meal of hard corn, preferably wheat or oats, should be provided daily.

Breeding is out of the question in such small establishments, so that whilst it is totally unnecessary to keep a male bird, provision must be made for the renewal of the stock periodically. Whether it pays better to clear off all old stock at the end of the first laying season, or to keep birds for two seasons, there is no general agreement, but it may be remembered that a hen never lays so well as in her first season, and that from the market point of view she is worth a little more as a yearling than as a two-year-old, so that on the principle that in such small runs it is desirable to keep only birds that are likely to give the very best results I lean to the plan of clearing out and renewing the stock annually. This means that the old birds must be sold at a low price, say 2s., and others bought at perhaps double the value, and though apparently wasteful, it is amply justified by the results.

Considering that these small runs are invariably well sheltered, it does not require a particularly hardy breed to lay during the winter. The Minorca may not be altogether satisfactory in an exposed situation, but in a backyard run there are few to beat it. A cross between the Minorca and the Black Hamburgh, or the Minorca and the Black Orpington, produces suitable birds for laying in confinement, and there are many crossbreds of no particular distinctiveness that appear to be cut out for this work, although comparatively useless on an open range. My experience has been that a small and active crossbred, produced by an intelligent poultry keeper, is as economical for the backyard run as any pure variety in existence.

A TALK TO AMATEUR FANCIERS.

THE ideal fancier is neither an optimist nor a pessimist but a philosopher, who takes bad luck with good luck as a matter of course, and I can think of no better advice to give an amateur than to be philosophic when disappointments arise. The wise man will regard these disappointments as part of his education, for they will not only inure him to a state of affairs that is inevitable in the poultry fancy, but they will set him to discover the why and the wherefore of these happenings. As an instance, it is by no means uncommon for an amateur to purchase a bird that has been winning, only to find that in his hands it fails to gain more than a card. The most likely reason is that the bird has passed its prime or is meeting stronger competition, or very likely the amateur is not exhibiting it in the same condition as did its former owner. In any case the amateur must disabuse himself of the idea that a bird that has once won a prize must necessarily be a winner from that time forward. We frequently hear exhibitors complaining that a bird has won first at one show and is only highly commended at the next. "Funny judging," they remark. But there is really nothing funny about it. There may be a score of reasons to explain the discrepancy and in the majority of cases, if the exhibitor attended both shows and knew anything about the points of his breed, he would realise that the bird had less competition to face when he won first prize.

In making a start in breeding and in exhibiting luck plays a very prominent part. I have known an expensive pen, properly mated (?) by a noted breeder, to fail to produce a chicken worth 10s., and on the other hand there are scores of cases where amateurs have made excellent commencements in manners that would, at the least, be considered unorthodox. At Sandy show, last August, an amateur fancier told me of the way he became an exhibitor of White Wyandottes. He bought several hens from a farm at 3s. 6d. each, mated them with a cock that cost him 12s. 6d., and bred therefrom a number of chickens that won at several shows during the summer, including a special for the best young bird in the show. There must have been some merit about the parents that the vendors did not recognise, but in any case it was a huge slice of luck for this exhibitor, for in

ninety-nine cases out of every hundred one might confidently prophesy failure from such a commencement.

However, instances of this kind provide a welcome relief to the many doleful tales of failure, and they serve to encourage fanciers to persevere in the hope that such luck may one day come their way. But they also prove that the expert adviser has a very difficult task in advising beginners how to make a start to the best advantage. Certainly no expert would think of recommending an amateur to buy hens from a farm at 3s. 6d. and mate them with a cock at 12s. 6d., nor would he feel justified in advising a complete novice to invest a large sum of money in breeding stock. My own opinion is that it pays best in the long run to act cautiously in such matters, and to commence with a small breeding pen mated by a reputable breeder and likely to breed specimens good enough to win at small shows. It is a great mistake for the beginner to fly too high. Let him win at the small shows before he tackles the big ones, and let him study his breed and learn how to manage his birds before he handles valuable specimens. Incidentally, it is impossible for a fancier to breed high-class specimens before he has learned what to breed for.

It is often remarked that exhibition birds purchased from skilled breeders frequently depreciate in value to a very considerable extent in the hands of amateurs. This is perfectly true, and it is due to the fact that nearly all breeds of poultry suffer from exposure. Buff fowls become mealy, white birds stain to a creamy or yellowish tint, bright coloured specimens fade, and even the darker birds lose the brilliance that is so much to be desired in show birds, whilst white lobes become discoloured and the texture of large single combs becomes rough. It is, in fact, quite impossible to keep an exhibition fowl in good show condition when it is given its liberty in an exposed run, and the amateur who becomes possessed of such a bird must provide proper accommodation for it if he desires to exhibit it successfully. But, on the other hand, a great mistake is made by some people in keeping such birds in exhibition pens for several weeks. This means that they get no exercise, they go off their feed, and subsequently lose condition and the perfect bloom which we desire in a show specimen.

Everyone knows the small and useful appliances known as cockerel pens. These provide suitable accommodation for show birds, having a small box for roosting and a tiny run in which the bird has room to scratch, whilst in the evenings or on dull days the inmate can be let out for an hour or two. As an alternative, or

in order to economise to some extent, a range of buildings and runs, partitioned off into small compartments, each to accommodate one or two show birds, may be constructed at little cost and in such a way that the birds are protected from sun and rain and at the same time are enabled to take sufficient exercise to keep them in condition.

It must not be supposed that the mere washing and cleaning of a bird is sufficient to fit it for the show pens. Its preparation for exhibition must commence at the period when its plumage, being completely developed, is in danger of being spoiled through exposure, and the amateur fancier will do well to take the work of shading in hand at that time, instead of waiting until sun and rain have done the mischief of which they are capable.



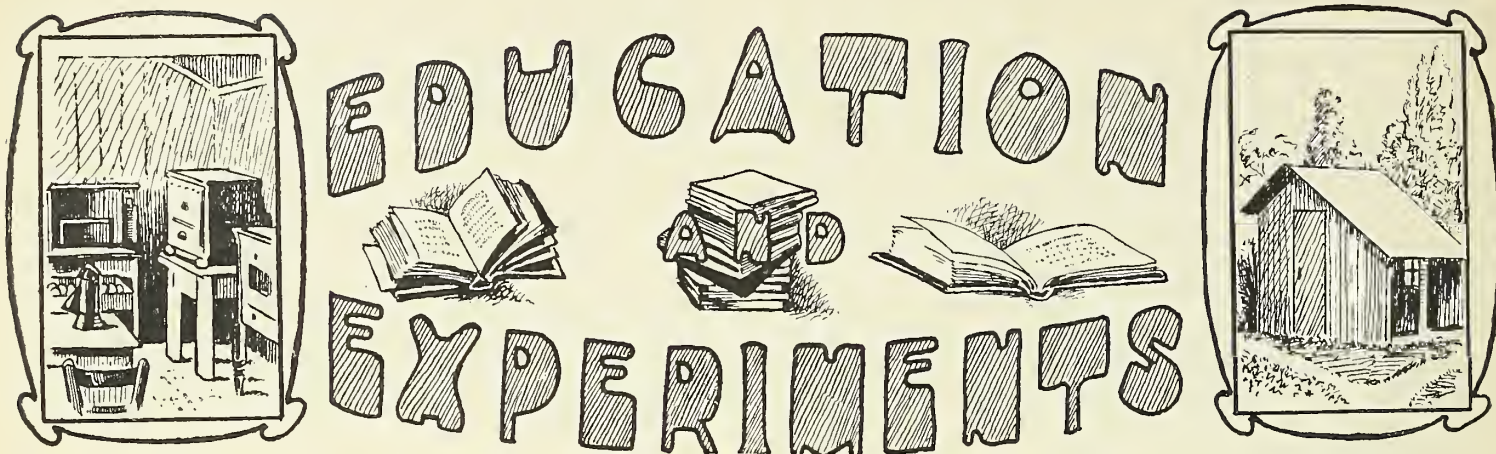
COCKEREL PENS AT "GALLINA," RUEIL, FRANCE. [Copyright.]

SPECIAL FEATURES.

Particular attention is called to the following:—

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Readers are requested to mention THE ILLUSTRATED POULTRY RECORD when replying to advertisements.



Proposed Poultry Professorships in America.

An American exchange states that the American Poultry Association is to commence a campaign, the object of which is to advance the interests of scientific poultry-keeping by means of the establishment of chairs at the various American universities. It will be remembered that Cornell University has already done this by appointing Mr. J. E. Rice professor of poultry husbandry. In view of the increased interest which the Board of Agriculture and the various universities and university colleges are taking in poultry-keeping in this country, the suggestion of the Poultry Association of America is interesting, and we look forward to the day when a similar campaign will be organised on this side of the water. The American Poultry Association is also endeavouring to form a committee of American and English poultry keepers with the object of preparing an international standard for judging poultry.

Poultry Education in Spain.

We have received particulars of the classes held at the "Ecole-Royale Officielle d'Aviculture" at Arenys de Mar (Barcelona), under the direction of M. Salvador Castelló. It is some few years since we visited this establishment, namely in 1903, and since then many improvements have been made. It was founded in 1896, under the patronage of the Queen-Regent, and the school is officially recognised by the Spanish Government. The classes include a series of sixty lectures, besides practical work, and the syllabus to hand shows that the subject is fully treated. The establishment includes a bacteriological laboratory, a library, a museum, a letter-carrying pigeon station, and many other departments, in addition to the usual appliances for up-to-date poultry-keeping. A special course is held from April 1 to July 1, at which all instruction is given in French. The farm is situated in one of the finest districts in Catalonia, and a course there should prove both instructive and pleasant.

Irish Co-Operative Poultry Societies.

In order to meet the difficulty which has been experienced by co-operative poultry societies in Ireland in obtaining efficient managers, the Department of Agriculture has made arrangements for training suitable men for this work. The training is carried out, at the expense of the Department, at approved co-operative poultry societies, and the courses extend from two to six weeks. During this time selected candidates are instructed in every detail connected with the management of the societies. In all, during the past year, six prospective managers have been thus qualified. We do not know what system is adopted for selecting suitable candidates for training, but if those selected possess a considerable knowledge of the poultry industry and are gifted with business acumen, the period of training may prove adequate; but, unless this is the case, we should think that the duration of the courses is too short to give the perfect understanding of the details which forms so necessary a factor towards the success of such societies.

Poultry Courses at Cornell University.

We have received the programme of Courses of Instruction in Agriculture at Cornell University for Session 1908-1909. Poultry husbandry occupies a prominent position as one subject in the general courses of agriculture, and, moreover, a special twelve weeks' poultry class is to be held from December 3, 1908, to February 24, 1909. This includes theoretical and practical studies, and the syllabus of subjects to be treated is a full one. For more advanced students a special feature is made of research work.

Poultry Instruction at the University College, Reading.

The next Terminal Course (ten weeks) in Poultry Keeping at the University College, Reading, and the College Poultry Farm, Theale, commences on Thursday, October 8, 1908. The theoretical

instruction, which includes aviculture, soil, meadows and pastures, avicultural zoology, chemistry of foods, and book-keeping, is given at the College, and the practical training is carried out on the College Farm at Theale. Application for particulars should be made to the Registrar, University College, Reading.

Loss of Weight in Eggs during Incubation.

The practical instructor at the College Poultry Farm, Theale, in the course of the series of incubation experiments which he has been conducting during the past two years, has elicited some interesting particulars with reference to the loss of weight in eggs by evaporation during incubation in the various types of machines, and also the ultimate weight of the newly hatched chickens. Buff Orpington eggs were chosen for this experiment, and all were selected for size, the required weight being between 2.05 oz. and 2.1 oz. They were divided into four groups, and treated as follows: (1) Set under a hen under the most suitable conditions; (2) Set in an English tank incubator; (3) Set in an American non-moisture hot-air incubator; and (4) Set in an American non-moisture hot-air incubator, but fitted with a special sand water tray specially designed for the purpose. This experiment was carried out a number of times, therefore the results may be taken as fairly general. During the entire period the eggs were weighed every three days, but it will be sufficient for our purpose if we give the final figures. These are as follows:

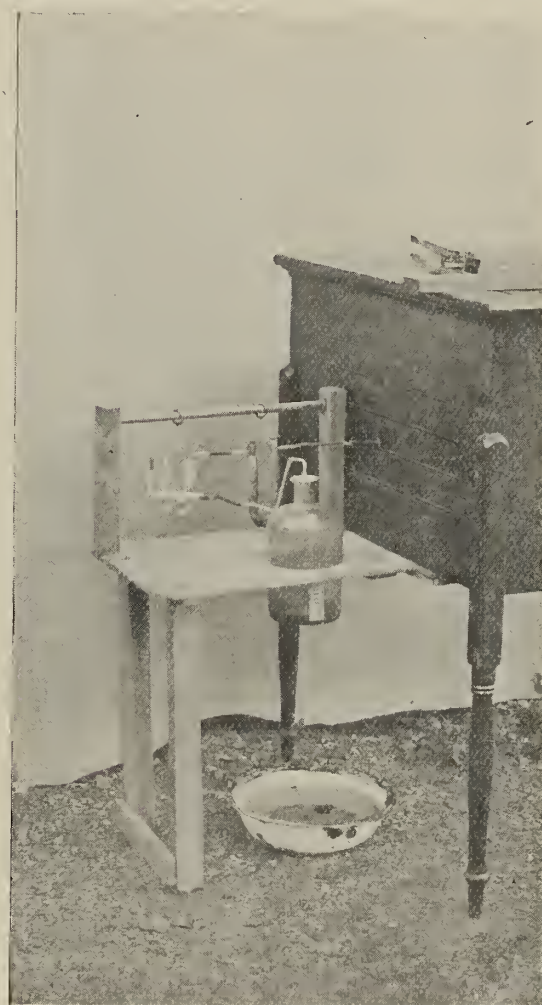
	Loss of Weight.	Weight of Chicken 12 hours old.
Hen	9.69 per cent.	1.79 oz.
Tank Machine	11.98 "	1.58 "
Hot-air Machine	15.33 "	1.32 "
Hot-air Machine (with sand water tray)	11.78 "	1.56 "

These figures are very surprising, and they seem to bear out the assertion, which so many breeders make, that hen-hatched chickens are the most livable. One would certainly think that the heavier the chicken the greater would be its stamina and the stronger its constitution. As yet no tests have been made, so far as we are aware, as to the rearing results of chickens hatched by hens and in the different types of incubators, but we hope that such a trial will be made by some one interested. Taking into consideration the percentage of water vapour in the air surrounding the eggs under a hen and in machines, it appears as though the hatching of livable chickens depends largely on the slow evaporation of the liquid portion of the egg. Experimental work in this direction is greatly needed, and it is to be hoped that from out the very large number of users of incubators some may be able and willing to carry out further tests.

CARBON DIOXIDE IN INCUBATION.

THERE has been a certain amount of discussion of late as to whether the presence of carbon dioxide in the egg drawer of an incubator is advantageous or not. This has arisen from the results of experiments which have been carried out by Prof. W. H. Day (O.A.C., Guelph), Mr. J. Dryden (Utah

Station), and Mr. J. L. Nix (Homer City, Pa.). It appears they have discovered the fact that there is always a large amount of carbon dioxide surrounding the eggs set under the hens, and this has evidently led them to believe that this gas is necessary for successful hatching. We do not hold this opinion ourselves, as we understand that carbon dioxide is a non-supporter of life, therefore we believe the presence of an appreciable quantity in the egg drawer cannot be beneficial. There is no doubt that this carbon dioxide is given off from the bodies of the hens as well as from the embryos within the shell,



[Copyright.]

APPARATUS FOR ESTIMATING THE CARBON-DIOXIDE AND WATER VAPOUR.

but we do not think this is any reason why this gas should be artificially applied to incubating eggs. This, however, is one of the many points which still remain to be determined. In the course of our investigations at Theale we have found that our best hatches—the largest percentage of chickens and the most livable chickens—have been when the amount of carbon dioxide was small and that any noticeable increase lowered the vitality of the newly hatched youngsters. In this connection we have analysed upwards of three hundred samples of air from the egg drawers of different machines, and upon the results of these we base our conclusions.

WILL. BROWN.

THE REAY COMMITTEE REPORT.

IT will be remembered that Lord Carrington, President of the Board of Agriculture and Fisheries, appointed a Departmental Committee in March, 1907,

to inquire as to the provision which has now been made for affording scientific and technical instruction in Agriculture in England and Wales, and to report whether, in view of the practical results which have already been obtained, the existing facilities for the purpose are satisfactory and sufficient, and, if not, in what manner they may, with advantage, be modified or extended.

The Committee was constituted as follows: The Right Hon. Lord Reay, G.C.I.E. (chairman), Lord Barnard, Lord Moreton, Mr. Francis Dyke Acland, M.P., Mr. Norman Lamont, M.P., Mr. Thomas Latham, Mr. John Charles Medd, Professor Thomas Hudson Middleton, M.A., M.Sc., Professor William Somerville, D.Sc., Mr. Henry Staveley-Hill, M.P., with Mr. Arthur Ernest Brooke-Hunt as secretary, and Mr. Henry Leon French as assistant secretary. In April The Lord Belper was added to the Committee.

The formation of a Departmental Committee to inquire into the question of education in connection with agriculture and the allied industries marks an era in the history of rural occupations, and we are glad to see by the Report which has been issued that the matter has now received attention from the Board of Agriculture. That it was urgently required is undoubted, as the last Committee which was appointed for the purpose

of inquiring into and reporting on Agricultural and Dairy Schools in Great Britain which may receive Government Grants, and to advise as to the Department which should be charged with the administration of such Grants,

was the Paget Committee, which sat during 1886 and 1887. At that time there were only four institutions which afforded facilities for scientific and technical instruction in agriculture, and one for dairy instruction, and not one which held classes in poultry husbandry. Showing the great advancement which has been made since 1887, it may be stated that the Reay Committee received evidence from representatives of thirty universities, colleges, and farm schools, &c., from a number of county councils, and also various public bodies, all of which are closely connected with the question of agricultural education. In all 113 witnesses were examined, and the published evidence fills a very large volume.

It is unnecessary for us to refer in detail to the recommendations of the Committee, as given in their Report, but a few comments on the general outline of their suggestions may not be out of place. The Report proves two important points, namely, that the status of agricultural education in England and Wales, particularly the experimental section of that work, is considerably lower than in many other countries, and that there is a great want of co-ordination among the various institutions. The former is directly the result of lack of funds, for, as it is stated in the summary,

the funds at present available for agricultural education are wholly inadequate, and considerably

increased funds must be provided, the main source of which must be the National Exchequer.

The Board of Agriculture has been starved, hence inadequate grants have been made to the various educational centres. It is a remarkable fact that so much has been accomplished, and it speaks well for those who have had the work in hand that they have not been deterred by the poor support they have received from the Government. In reading through the evidence and the Report one is struck by the want of co-ordination between the various institutions, and we are pleased to note that the Committee remark upon this fact, for they state that,

Between all agricultural institutions working in a particular area there should be some definite connection, so that the aid and influence of higher institutions may be given to workers in winter schools and farm institutes.

The conclusion arrived at by the Committee, that the number of institutions providing higher education in agriculture will be sufficient when they are properly supported, is, we think, a correct one, for a small number of highly organised, fully staffed, properly equipped teaching centres are capable of producing more lasting and more beneficial results than a larger number less qualified.

The need for experimental work is also pointed out, in that

the Committee think that it would be unwise to develop any extensive system of providing instruction in agriculture in Great Britain without at the same time providing for research so as to lay the foundation which all experience has proved to be necessary for successful results.

A number of witnesses drew attention to the economic value of research work, and the Committee state it as their belief that

... a good case might be made out for expenditure on agricultural research as a national investment. . .

It is to be regretted that there is an apparent lack of interest taken in poultry-keeping by the Committee. In spite of the fact that evidence was received specially on this branch of agriculture, the Committee evidently fail to realise the great and increasing importance of the subject. References are made to the industry, but from the general tone of the Report we are forced to conclude that the Committee do not as yet appreciate the fact that to-day poultry-keeping is one of the most important of the minor branches of agriculture.

Instruction in poultry-keeping is given at some of the colleges, while migratory work is promoted by some County Councils; but in view of the importance of the industry, especially to cottagers and small holders, the Committee consider that the subject should be more generally and fully provided for. The keeping of poultry is making rapid advance, and, although no actual statistics are at present available, common observation shows that the number kept has increased very largely of late years. Mr. Edward Brown, who has done much to promote the industry, stated that there was scope for a still greater increase. There seems to be a wide field for experimental work and research in connection with this subject, many problems awaiting investigation; and the Committee are of opinion that work of this nature should be undertaken.

We are glad that the officials of the Board of Agriculture themselves understand the great need

there is for advancement in this direction, and we can only hope, if the result of the Reay Committee is to place a larger sum of money at the disposal of the Board, that educational, experimental, and research work in this subject will be adequately assisted.

HOW EXPERIMENTAL WORK CAN HELP THE POULTRY INDUSTRY.

THE need for experimental work in connection with poultry husbandry is indeed great. Those who have from time to time put their theories to the test, and who thereby elicited certain minor facts, can perhaps realise more fully the enormous amount of labour which will have to be expended before any important advancement is made in the industry by increased knowledge, than those who have as yet not attempted any research work. To accumulate data on any given subject calls not only for patient labour, but also for much thought and a certain amount of scientific knowledge; still, experimental work must be conducted if we are to place the poultry industry on the level which is its right.

When the fact is taken into consideration that utility poultry-keeping, as an organised branch of the great agricultural art, is only some thirty years old, one is compelled to admit that a great amount has been accomplished, but when the mass of information still to be gathered is considered it seems as though practically nothing has been done. All credit must be given, not only to those early pioneers of utility poultry-keeping, but also to those who are working for the advancement of the industry to-day, but even in face of this, one cannot but think that the need for experimentalists at the present time is very great.

We are undoubtedly working at a disadvantage in this country in that all efforts must be personal and that no public funds are available for the endowment of experimental or research work, but there should be nothing in this to deter us all from doing our utmost in the direction named. The advocates of utility poultry-keeping had to fight harder battles and overcome more, seemingly insurmountable, difficulties in the past before they were able to place the industry in the position which it has now attained as one of the most important of all the minor branches of agriculture; therefore we are only asking for a continuance—but to an increased degree—of this individual effort.

It is difficult to select special points for elucidation from out the great mass of subjects, as they all appear so important, but we should like to make a few suggestions indicating certain lines along which work might be conducted with advantage.

Artificial incubation is wonderfully successful, considering that a machine is employed to do the same work as a hen instinctively performs, but incubators are a long way from perfection. Experiments in incubation should be in the direction of hatching more livable chickens rather than an increased number. After keeping careful records for some years past, we have come to the conclusion that an average of 80 per cent. of the fertile eggs can be

hatched during an entire season, and we do not think that hens do better than this, but in our minds we are certain that hen-hatched chickens possess more vitality and that they can be more easily reared. Some of the questions which still remain to be answered are: (1) What relative degree of humidity of the air surrounding the eggs is required to produce the correct amount of evaporation from the eggs? (2) What quantity of oxygen should be supplied to the eggs? (3) Whether the presence of carbon dioxide in the egg drawer is beneficial or otherwise? (4) Whether contact heat, as in the old Cantello and Penman incubators, or radiated heat, as in the present-day machines, is better? (5) Whether dead-in-shell is caused by an incorrect amount of water vapour in the air of the egg chamber or to some inherent weakness of the germ? and (6) Whether white diarrhoea in chickens is caused, as claimed in America, by artificial incubation, or whether it is due to some other influence?

Information is also required with reference to the following:

The best method of feeding for winter eggs; whether artificial rearing cannot be improved by the introduction of new methods and better appliances; the most suitable housing for winter eggs, whether on the colony, portable house, or scratching-shed system; the Mendal law in relation to poultry; all questions of fattening poultry, particularly with reference to the influence of the different foods employed; and a thorough investigation of the diseases of poultry, their causes, prevention, and cure.

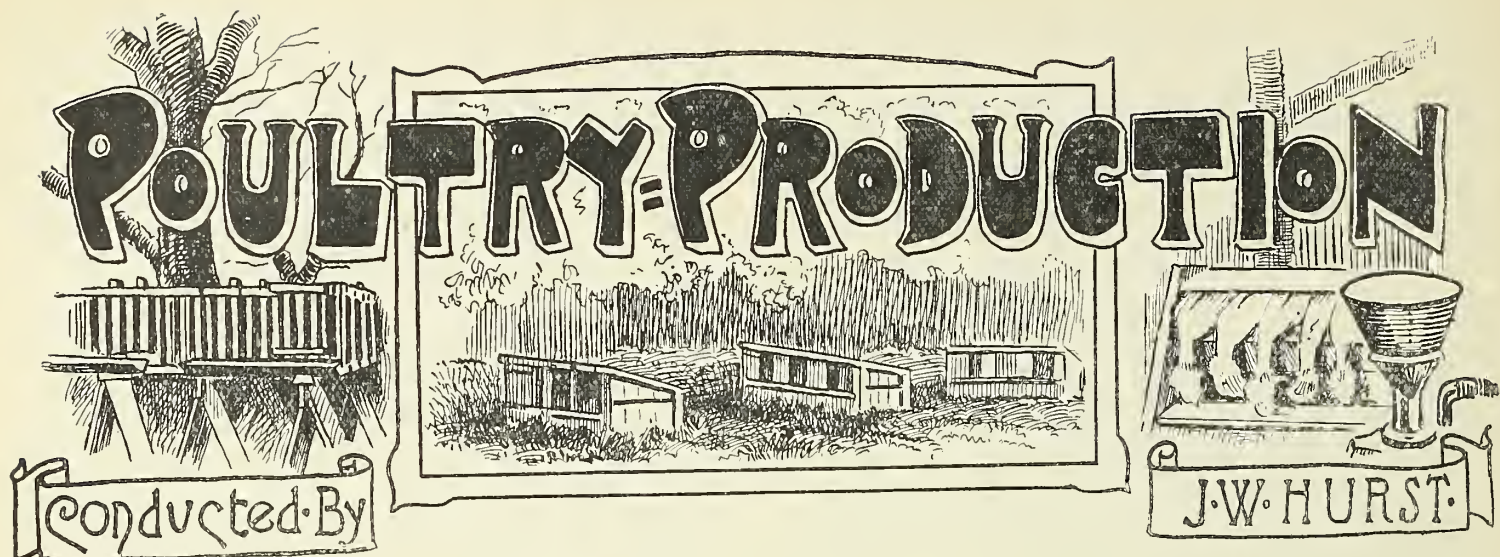
All of these subjects are of vital interest to those who have to make their livelihood from poultry keeping.

In conclusion we would say that experiments must prove something, whether negatively or positively, therefore no labour in this field can ever be counted as lost.

NEW APPOINTMENTS.

WE learn that Mr. W. A. Brown, of Ontario, Canada, has been appointed to fill the position recently occupied by the late Prof. Gowell at Orono, Maine. Mr. Brown has a good record behind him, as he has been assistant lecturer in poultry at the Ontario Agricultural College, Guelph, where he graduated this year, taking the full course in Agriculture. He has also acted as manager at the West Virginia Experimental Station, besides having worked for three summers at the poultry station at Guelph. The position Mr. Brown has to fill is a difficult one, but we wish him every success in his new work.

Mr. C. K. Graham has resigned the directorship of the poultry section in connection with the agricultural college at Storrs, Conn., to take a more responsible position at Hampton Institute, Va. We not only wish Mr. Graham success at Hampton, but we also congratulate Mr. Stoneburn, who, we hear, is to follow him at Storrs. It will be a large order to fill this position, coming after such an authority as Mr. Graham, but we hope that under the direction of Mr. Stoneburn the work will prosper and be a continued help to the poultry keepers of the State.



Purchasing Stock.

At this period, and until after Old Michaelmas Day, a considerable head of poultry invariably changes hands at the innumerable farm sales throughout the country; and there is a more or less general transfer of agricultural lands from one holder to another. There is, therefore, a very widespread dissemination of disease as a direct consequence of the many indiscriminate purchases and the introduction of strange birds into previously more or less healthy flocks. We have known large numbers of distempered or ropy birds to be so well doctored that they successfully passed muster on the sale day, the disease merely remaining dormant until the fowls were again subjected to unfavourable climatic conditions—when it was communicated to the flocks of the purchasers with which they had been too hastily mixed. This is perhaps an extreme example, although by no means so exceptional as may be supposed, and it is related for the information of the uninitiated and unwary. Conduct often belies appearance, and the bucolic countenance is sometimes the mask of a Machiavellian mind. The country poultry keeper is occasionally the victim of the enterprising amateur—but not always. He is sometimes also a horsedealer!

Taking up Land.

In the matter of the transfer of land, the beginner is more often than not a willing victim; even regarding as an inducement to its acquisition the fact that the desired holding has been previously utilised for poultry production, and more than probably overstocked. If it has been so used it must be suitable, and therefore desirable! If by chance a portion is divided into pens, and the houses and “plant” are purchasable at a valuation, he is pleased with the great convenience of the place and the saving of initial labour. Perhaps such an one deserves all the trouble he is eager to buy, which is not clearly specified in the inventory; nevertheless we would save him, if such a consummation of our efforts is possible. The trouble is that so many commencing poultry producers are not farmers in any real sense of the word, and therefore create a run on small parcels

of land totally inadequate to any commercial purpose of poultry production on a sufficient scale; and as a result of their demand these plots of limited area are tenanted by a succession of occupiers, each striving after the unattainable, until every square yard of the surface is stale and the whole so fowl-sick as to render the keeping of fowls in health quite impossible—until the land has been sufficiently rested and cropped. The eagerness of newcomers prevents this, and increases the contamination; their subsequent failure is as inevitable as it is harmful. *Verbum sat sapienti!*

Treatment of Geese.

The gosling season is practically over for this year, and the birds that have been run on until now must in most cases be held for the winter demand, being allowed full liberty and the same general treatment as that to which the stock birds are subjected at this time of the year. In the case both of the adult and the young stock, due consideration must be given to the seasonable reduction in the nutritive value of the herbage, and as these birds are also primarily grazers the feeder of four-legged stock will understand that the deficiencies of the pasture must be balanced in the hand-feeding; the maintenance of condition being essential to the thrift of young and old. Out of our own experience we are firm believers in the profitableness of small flocks of geese, kept in suitable situations; and have found them do well in autumn upon a small allowance of soft food, such as ground oats and sharps in the early morning and a little corn at night when they return from the fields upon which they have been run all day. The time of preparation for winter marketing is not yet.

The Growing Turkeys.

It is not enough that the turkey poults have passed the danger zone of mere existence, and have been subsequently more or less successfully brought along since they “shot the red”—which interesting but unlovely development is too often regarded as the climax of the rearer’s effort. The continuity of bodily growth and development must be persistently maintained, and as the present season advances this is less

easily achieved than in the intermediate period. In this production, as in that of geese, a sufficiency and suitability of range are essential to the well-being of the birds, the reduction of cost, and the minimising of labour; nevertheless both cost and labour must be increased in proportion as natural conditions are altered by the changing seasons. There is a point at which economy in feeding synchronises with loss of condition, and present parsimony evolves ultimate extravagance. After the stubbling, new corn may be given with excellent results, and for soft food ground oats and sharps make a good mixture; with enough

MATING DUCKS FOR EARLY LAYING.

By W. BYCOTT.

FOR early and prolific laying a great deal depends upon careful selection and mating. The stock birds should be mated from unrelated, well-known, reliable, and prolific utility strains; although I have had young Rouens and Aylesburys of prize-winning



A GROUP OF YOUNG AYLESBURY DUCKS.

[Copyright.]

green food thrown down to supply the deficiencies of the growing herbage.

Present Chicken Rearing.

October is more often than not a trying month for the chicken rearer and his chickens. None but the commercial producer would seriously contemplate such an undertaking, and he does not always approach it with equanimity. The dampness of the grass and the chilling air, particularly in the early morning, necessitate a very careful regulation as regards the ventilation of coops and hutches, as well as of the number of birds that each will safely accommodate without undue heating in relation to external conditions.

strains, January and February hatched, commence to lay the following June, the eggs from such birds (after the first batch) being very fertile when starting to lay again in November. These are exceptions and I should, to ensure successful early laying and large quantities of eggs, prefer the ducks to be of a smaller variety, such as the Indian Runner. These should be sure layers at five to six months old and would recommence with reliable fertile eggs when wanted in November, nearly all the first batches of eggs from young ducks being clear as a rule. For utility purposes these ducks should be mated with Aylesbury or Pekin drakes of prolific laying strains, of moderate size, taking care that they have been reared naturally

and are hardy—not forced in any way, a large percentage of heavy and over-fed birds being ruined for successful breeding. For early utility purposes a first cross with a moderate size Aylesbury drake upon large Indian Runner ducks is the most suitable and gives excellent results, their offspring being as large again as the parents, full of health, vigour, and stamina, retaining all the egg-producing powers of the Runner duck, with good size and quality. Unless ducks of this cross can be procured, guaranteed bred from pure reliable prolific strains on both sides (as it entirely defeats the object to commence with non-descripts), select three or four large February-hatched

(7 lb. weight), and their offspring, if reared well, could be made to weigh 10 lb. each at six months, and 6 lb. each when ready in first feathers, at nine to eleven weeks, and should all be killed off for the spit, taking care to retain the parent birds for a second year and having others of the current year of the same first cross to follow. If more than one trio of ducks and one drake is desired, two drakes and nine ducks, or three drakes and fourteen ducks, may be run together, providing they have plenty of room, but two drakes and seven ducks or three drakes and twelve ducks are safer. When rearing good early-laying stock ducks, much depends upon circumstances and accom-



BREEDING PENS OF AYLESBURY DUCKS.

[Copyright.]

Indian Runner ducks, record laying strains. February-hatched preferred, many January birds being cramped in shape, owing to being too much confined in bad weather, and although good for the table are not suitable for breeding. Mate the February ducks with a moderate size Aylesbury drake, and the offspring may all be reared in the best possible way until the sex is discerned, then take as many of the February-hatched ducklings as are required to select from for laying the next season. Rear them in the ordinary way for stock purposes, of which I shall have more to say later, all the remainder, drakes and ducklings, being fattened and killed off. The selected ducks should be again crossed with an Aylesbury drake

moderation at hand to secure a good, strong, healthy constitution. After showing the first feathers at six weeks they should have the free range of fields and ponds, &c., and be fed chiefly upon whole wheat, oats, and occasionally white American maize, leaving off soft food entirely, or giving it only once a day. Up to that time they should be reared in the same manner as for fattening for the table, commencing as soon as they are hatched with whole rice, left to stand in boiling water until cool, then at three or four days' old mixing it with good sound oatmeal; at ten days adding other meals, greaves, bullock's liver, or sheep's pluck, and a trough of water with grit and a little whole wheat added. If kept in confinement they

should have soft food once a day, with greaves two or three times a week in place of worms and slugs, which they cannot procure for themselves, and if possible a supply of running fresh water, however small. As the drakes show themselves at six weeks old they should be removed from the ducks intended for stock, and fattened up and killed. By September the February-hatched birds will be a grand flock of laying ducks and should be mated with the Aylesbury any time, or not later than October; these should have free range and access to ponds, &c. To have a continual supply of eggs during a frost in winter, the ducks should, if possible, have access to a running stream, which will not easily or entirely freeze over; in any case the ice should always be broken during a frost; and a little barley meal mixed with greaves can be given while the blast lasts, but should be left off as soon as milder weather returns, as a too highly stimulating food is dangerous to laying birds in many ways, causing infertile and also eventually unhealthy, unsound, and finally soft eggs, and in many cases, death from inflammation of the egg organs. If attention is paid to all details, nothing except accident should prevent an abundance of fertile eggs, and ducklings ready for the spit at a time when there is a great demand for them. It is also quite possible to have

a good hatch of fertile eggs without water, except for drinking, in a limited space if the run is kept quite clean. Grit and animal food, such as sheep's entrails or, better still, worms should be given the n. A child can always collect the latter, following close after a plough, or they will be found on mild nights in gardens and upon lawns by quietly taking a bull's-eye lantern and searching for them. A practised hand will soon secure a pint, as the ground is usually alive with them. The Pekin bears confinement well, in fact, better than the Aylesbury, but being a heavy feather-producing variety is seldom found free from stubbs after first feathering. The Cayuga is also a splendid variety, and suitable for a limited space, and being of rich lustrous green plumage the feathers do not get soiled so soon as those of lighter coloured varieties; these birds are excellent in flavour and of good size, drakes 10 lb., ducks 9 lb. in fine specimens of the breed. Ducks hate to be housed up and for the sake of a few eggs that may be dropped in the water, or laid about and lost, their laying is greatly retarded by keeping them shut up until late hours. They will give far better results in the long run if let out punctually every morning, at 6 or at the latest 7 a.m., when most of the eggs will usually be found to have been laid on the floor of the house during the early hours before letting out.



The Trade in Game.

The principal feature of the markets during the past six weeks has been the advent of game. The first grouse to arrive realised high prices, and it was reported that as much as a guinea a brace was obtained, but we were unable to get any confirmation of this. In many cases, however, as much as eight shillings and sixpence was given for a single bird. This price was obtained by the earliest arrivals, some of which, we thought, were quite "early enough." In twenty-four hours prices were much easier, birds being procurable at four shillings each. After the rush of the first arrivals was over, cold-stored birds were very much in evidence, and these could be bought at extremely low figures. It was rather amusing to see Grouse ticketed, side by side, in poulterers' shops:—Yorkshire Grouse 5s. 6d., fine large Grouse 2s. 3d. These adjectives were used in the place of Cold

Stored Old Grouse. Scotch birds were particularly good in the beginning of the season, but those from Derbyshire and Cumberland were rather poor, owing to the cold weather experienced in the spring. The report, if true, that Black Game and Grouse have left the Devonshire Moors is very much to be regretted. Up to the time of writing few Black Cock have arrived, but these will soon be more plentiful. The supply of Partridges was not so good as it might have been, the young birds, as a rule, being small, some so much so in fact that they did not sell so readily as they otherwise would have done. During the first part of the month, however, it was rather difficult to find any birds for sale on the markets after 11 a.m. There has been a fair supply of cold-stored Russian birds, but they were not much in demand, realising very low prices. This trade does not really commence till the supply of English birds falls off.

The Poultry Trade.

Poultry realises its lowest value when game is in season. This year, however, it seems that, with the exception of August, when there was a very sharp decline in trade all round, the demand for the best quality poultry has been exceedingly good, prices being excellently maintained. Owing to the cooler weather the poultry trade has been very good during September, birds having kept in fine condition. The salesmen on the Central Markets seemed generally well satisfied with the demand, considerably larger quantities being disposed of at this period of the year than one would expect. This is probably due to the fact that it is so cheap and therefore within the means of a much larger proportion of the consuming public. At this time there is not perhaps such a large demand for the very finest quality of Surrey fowls, but still birds of good quality are much sought after. Quality always tells and is in good demand.

The Market Requirements.

It is much to be regretted that English producers of poultry do not pay more attention to market requirements. Through neglecting this important point a large sum of money is lost to them annually. One often sees birds prepared according to the Devonshire fashion, almost spoilt by reason of the fact that far too many feathers are left on the wings. This often stops the best poultry buyers from purchasing them, for the simple reason that so much time is occupied in plucking. We have repeatedly seen good birds refused on these grounds. The salesmen have consequently to dispose of them to small buyers, who take perhaps half-a-dozen at a time. To finish plucking half-a-dozen birds is a small matter, but where one hundred birds are required for morning orders it is altogether a different matter. What is known on the markets as topping consignments, that is putting the best birds on top, is a most harmful thing to do from the producer's point of view. It never deceives an experienced buyer, and when resorted to always lowers the value.

Items of Interest from Different Sources.

From the Board of Agriculture and Fisheries Statistics for 1907 we learn that in 1887 foreign countries supplied us with 30 eggs per head of the population. In 1903-4 the number had risen to 56, but last year it had declined to 51 per head.

The total amount of money expended from 1887 to 1907 inclusive on foreign rabbits, game, poultry, and eggs is as follows:—

Eggs	...	...	...	£101,338,921
Poultry and Game	...	...	...	15,857,687
Rabbits	...	...	...	11,294,006
Total	...	...	...	£128,490,614

During August the value of foreign imports of game amounted to £690.

Last year New South Wales exported to this country 626 head of live poultry and 30 doz. cold-stored eggs.

Australia and New Zealand sent during August rabbits to the value of £64,908 and £13,221 respectively.

THE EGG AND POULTRY TRADE.

Can We Compete with the Foreigner?

By VERNEY CARTER.

THIS is a question important to producer and consumer alike. With regard to foreign competition in the egg trade there exists a considerable amount of misconception. It is generally thought that our climate is not so suitable to poultry culture as that of other countries. This, coupled with the fact that living and wages are so much cheaper abroad, is generally put forward as a reason why we are unable to compete. As a matter of fact, our climate is just as, if not more, suitable to this branch of agriculture as that of those countries which send us the preponderating mass of these imports.

For the purpose of this article it will be necessary to refer briefly to the Board of Trade and Navigation returns for 1907, a summary of which is given below, placing the principal countries according to the value of their total quantities.

IMPORTS OF EGGS, 1907.

Country of Origin.	Total Value.	Per cent. of Quantities.	Average Value for 120.
	£		s. d.
Russia ..	3,078,838	43.16	6 7 $\frac{3}{4}$
Denmark ..	1,774,318	24.89	9 4 $\frac{1}{2}$
Austria-Hungary	640,549	8.98	7 3 $\frac{1}{2}$
Italy ..	594,307	8.28	8 4 $\frac{1}{4}$
France ..	541,088	7.59	8 9 $\frac{1}{4}$
Canada ..	53,084	0.75	9 1
Other countries	452,348	6.35	7 0 $\frac{1}{2}$
	£7,134,532	100.00	

It may be well to point out that in the Board of Trade returns Germany and Belgium are credited with supplying us with eggs, but this is not the case, the eggs being credited to this last country, through which they pass. Of the supplies credited to Germany two-thirds are Russian and one-third Austro-Hungarian, and of the Belgian two-thirds come from Italy and one-third from Austria-Hungary; therefore I have credited these to their respective countries.

It will be seen that Russia, Austria-Hungary, and Denmark sent us 77.03 per cent. of our total imports, and surely no one can seriously contend that our climate is so much inferior to that of these countries. Italy and France, who have a reputation for their climates, send, as is shown above, only 15.87 per cent. Here, again, it is those eggs which we receive from their northern parts which command the better prices on these markets.

Russia, Austria, and Hungary, whose exports form half the value of our total imports, supply us with our cheapest eggs, excepting, of course, Morocco and Egypt. These imports fulfil a very important function, providing a valuable asset in the form of a cheap food for the poorer classes, as well as being indispensable to certain manufacturing purposes, for which it would not pay the English producer to cater.

It may be reasonably argued that these cheap imports tend towards cheapening home produce. That this is not so is proved by the fact that they cater for and fulfil an entirely different function, and do not in any way compete in that sphere of the trade which is the most remunerative. Even as far as their cheapness is concerned, the past ten years has proved that they are steadily rising in value, having during that period risen in annual value from 5s. 4½d. per 120 to 6s. 7¼d., owing to the fact that higher prices have to be paid for them in Russia, rather than to their improved quality. There is every sign, too, that they will be still dearer in the

not produce, so far as this country is concerned, during November, December, January, and February, and those sold during this period have been preserved. Much of the above applies equally to Austro-Hungarian produce, but their average value is considerably higher, ranging from 7s. to 8s. 6d per 120 for their best qualities. This higher average value is partly accounted for by the fact that these two countries export during the winter months, but like the Russians they are not at all likely ever to be able to compete with English produce, as they take from at least fourteen to twenty days to reach here. During the spring and summer months they



AN EGG DEPOT IN SWEDEN.

[Photo by O. Insveßon.]

future. Unless there is some great unforeseen improvement made in the means of transit, or in the methods of preserving, it is impossible on account of the distance they are produced from these shores for them to arrive in such a condition of quality as to be competitive with home produce. At the present time they take from twenty-eight to forty days to reach this country.

Buying in Russia commences in March or April and ends during September or October. These times vary considerably, depending entirely upon whether the winter is early or late. Therefore Russia does

realise low values, being used by confectioners and for secondary cooking purposes, sweet making, etc. These two countries supplied us last year with six eggs per head of the population in England, Scotland and Wales.

Italy is a country which approaches us nearer than the above as a competitor. She supplies us with a superior class of cooking eggs, which arrive in good condition in this country during the early spring and summer, but directly the hot weather commences their quality deteriorates greatly. Her climate is distinctly disadvantageous to her as far as the egg

TABLE OF PRICES REALISED FOR HOME, COLONIAL, AND FOREIGN POULTRY, GAME, AND EGGS DURING SEPTEMBER.

FOREIGN POULTRY—LONDON MARKETS.									
ENGLISH POULTRY—LONDON MARKETS.		PRICES REALISED DURING THE MONTH.							
DESCRIPTION	1st Week. Each.	2nd Week. Each.	3rd Week. Each.	4th Week. Each.	COUNTRIES OF ORIGIN.	Chickens, per lb.	Ducks, per lb.	Ducklings, per lb.	Geese, per lb.
Surrey Chickens.....	2/6 to 4/6	2/6 to 4/6	2/6 to 4/6	3/3 to 3/9	Russia.....	1/3 to 1/6			0/5 to 0/5½
Sussex ".....	2/6 " 4/6	2/6 " 4/6	2/6 " 4/6	2/6 " 3/9	Belgium.....				
Yorkshire ".....	2/3 " 2/9	2/3 " 2/9	2/3 " 2/9	2/6 " 3/0	France.....				
Boston ".....	2/3 " 2/6	2/3 " 2/6	2/3 " 2/6	2/3 " 2/6	United States of America.....				
Essex ".....	2/0 " 3/3	2/3 " 3/6	2/6 " 2/9	2/6 " 2/9	Austria.....	1/4 to 1/6			
Capons.....	1/6 " 2/9	1/9 " 2/9	1/9 " 2/3	1/9 " 2/3	Canada.....				
Irish Chickens.....	1/3 " 2/3	1/3 " 2/0	1/2 " 2/0	1/2 " 1/9	Australia.....				
Live Hens.....	3/0 " 3/3	2/6 " 3/0	2/6 " 3/0	2/6 " 3/0					
Aylesbury Ducklings.....	2/3 " 2/6	2/0 " 2/9	2/3 " 2/6	2/3 " 2/6					
Ducks.....	4/6 " 6/0	4/6 " 6/0	4/6 " 6/0	4/6 " 6/0					
Geese.....	per lb.	per lb.	per lb.	per lb.					
Turkeys, English.....	0/9 " 0/10	0/9 " 0/10	0/9 " 0/10	0/9 " 0/10					
" Irish.....	0/9 " 0/10	0/9 " 0/10	0/9 " 0/10	0/9 " 0/10					
ENGLISH GAME—LONDON MARKETS.									
DESCRIPTION.	Each.	Each.	Each.	Each.	DESCRIPTION.	Price Each During Month.	COUNTRIES OF ORIGIN.	Declared Values. £	
Grouse.....	8/6 to 4/0	4/6 to 3/9	3/0 to 3/6	3/9 to 4/3	Capercaillie.....	1/6 to 2/0	Russia.....	3,352	
Partridges.....	4/6 " 2/6	2/6 " 1/9	2/6 " 2/6	2/6 " 1/9	Black Game.....	0/10 " 1/0	Belgium.....	2,723	
Pheasants.....	—	—	—	—	Partridges.....	1/4 " 1/6	France.....	3,906	
Black Game.....	3/0 " 3/6	3/0 " 3/6	3/0 " 4/3	3/0 " 4/3	Quail.....	0/9 " 1/4	United States of America.....	5	
Hares.....	0/8 " 1/9	0/8 " 1/9	0/8 " 1/9	0/8 " 1/9	Bordeaux Pigeons.....	0/9 " 1/6	Other Countries.....	1,430	
Rabbits, Tame.....	0/8 " 0/10	0/8 " 0/10	0/8 " 0/10	0/8 " 0/10	Hares.....	1/10 " 2/2			
" Wild.....	0/6 " 0/9	0/6 " 0/9	0/6 " 0/9	0/6 " 0/9	Rabbits.....	0/5 " 0/7½			
Pigeons, Tame.....	0/6 " 0/8	0/6 " 0/8	0/6 " 0/8	0/6 " 0/8	Snipe.....	—	Totals.....	£11,416	
" Wild.....	1/3 " 2/0	1/3 " 1/9	1/3 " 1/8	1/4 " 1/8					
Wild Duck.....	—	—	—	—					
Woodcock.....	—	—	—	—					
Snipe.....	—	—	—	—					
Plover.....	—	—	—	—					
ENGLISH EGGS.									
MARKETS.	Per 120.	Per 120.	Per 120.	Per 120.	IRISH EGGS.				
LONDON.....	11/0 to 12/6	11/0 to 13/4	11/8 to 13/6	12/6 to 14/0	DESCRIPTION.	1st Week. Per 120.	2nd Week. Per 120.	3rd Week. Per 120.	4th Week. Per 120.
Provinces.....	Eggs per 1/-	Eggs per 1/-	Eggs per 1/-	Eggs per 1/-	Irish Eggs	9/0 to 10/0	9/0 to 10/3	9/0 to 10/3	9/6 to 10/6
MANCHESTER.....	11 to 12	10 to 11	10 to 11	9 to 10	FOREIGN EGGS.				
BRISTOL.....	1/1 per doz	1/1 per doz	1/1 per doz	1/2 per doz	DESCRIPTION.	1st Week. Per 120.	2nd Week. Per 120.	3rd Week. Per 120.	4th Week. Per 120.
					French.....	10/0 to 12/0	10/0 to 12/6	10/9 to 13/0	10/9 to 13/0
					Danish.....	9/0 " 10/0	10/0 " 11/0	10/0 " 11/6	10/0 " 11/6
					Italian.....	8/3 " 9/0	8/6 " 9/6	8/6 " 10/9	8/6 " 10/9
					Austrian.....	6/9 " 8/0	6/9 " 8/0	6/9 " 8/0	7/0 " 8/3
					Russian.....	6/6 " 8/0	6/9 " 8/0	6/9 " 8/0	6/9 " 8/0
					Australian.....	—	—	—	—
					Canadian.....	—	—	—	—
IMPORTS OF POULTRY AND GAME. MONTH ENDING AUG. 31, '08.									
COUNTRIES OF ORIGIN.	Chickens, per lb.	Ducks, per lb.	Ducklings, per lb.	Geese, per lb.	Turkeys, per lb.				
Russia.....	1/3 to 1/6								
Belgium.....									
France.....									
United States of America.....									
Australia.....									
Totals.....									
IMPORTS OF EGGS. MONTH ENDING AUG. 31, '08.									
COUNTRIES OF ORIGIN.	Quantities in Gt. Hund.	Declared Values. £							
Russia.....	713,462	239,849							
Denmark.....	348,525	149,478							
Germany.....	76,636	26,659							
Belgium.....	97,260	37,456							
France.....	110,842	45,693							
Canada.....	—	—							
Australia.....	—	—							
Other Countries.....	58,113	22,050							
Totals.....	1,404,838	£521,185							

trade is concerned, as heat is very detrimental to keeping an egg in sound condition. The average price of her best brands is 9s. 9d. per 120. One must not lose sight of the fact that a large proportion of the eggs she sends us realise much lower values than that quoted above, on account of their inferior size and quality, and these, like the Austrian, are used entirely for secondary cooking purposes.

From the above it will be seen that quite 66 per cent. of our total imports really do not compete with English produce. The small quantities we receive from Canada hardly affect our markets at all. What she does send are preserved eggs. These it will only pay her to send during the winter months, when supply is much below demand. Her exports of this commodity to this country show a very marked falling off; in 1901 she supplied 4.12 per cent. of the total value of the foreign imports, as against 0.75 in 1907. In the "Report on the Poultry Industry in America," published by the National Poultry Organisation Society two years ago, this decline was attributed to the "rapid growth of the consumption of eggs, and better prices obtained in that country. Much of the same thing has taken place with regard to Australian imports of this class."

We have now to deal with Denmark and France. These two countries are our most powerful competitors, and as such we must regard them. Denmark ranks in importance next to Russia in respect to the annual value and quantities of her exports. This country holds her high position in the trade entirely by the splendid system of organisation she has adopted, and thoroughly deserves the success she has attained. The average value of her eggs per 120 is higher than that of other countries. They arrive on these markets in from seven to nine days. There are, however, very strong reasons for believing that Denmark has reached the maximum of her possible output, and there is no fear of her ever being able to swamp our markets. The greatest demand for her eggs lies in the Midlands and North, but even there they are not so eagerly sought after as those of English origin. Granting her success, the best brands she sends us will never realise such high values as English produce. By far the greater bulk of Danish eggs are used for secondary purposes.

France is our next competitor. As regards quantities she now ranks fifth in importance, sending about one-third of the quantities received from Denmark. Her best qualities arrive on these markets in from four to six days. She sends a brand which realises the highest value of any foreign egg. These come from the North of France, in the region of Calais, and are known to the trade as Calais Browns; their average value per 120 is about 12s. 7d., and are much prized by English merchants on account of their colour, size, and freshness. The trade in these eggs is highly specialised; they are rapidly collected, graded, and marketed—hence their value. They are, however, very limited in quantities, and therefore are not such powerful factors on the markets as one might at first suppose; nevertheless, they find a very ready sale.

When we compare the quantities these two countries sent during 1907 with the population of England, Scotland, and Wales, they equal about sixteen eggs per head.

Under the heading of Other Countries are included Norway, Sweden, the Channel Islands, Portugal, Spain, Canary Islands, Roumania, Gibraltar, Turkey, Egypt, Morocco, and South Australia. The combined exports of these countries equal 6.35 per cent. of the total quantities received; the quantities being so small there is no need to deal with them on a separate basis. Egypt and Morocco send the largest numbers relatively, these being the cheapest eggs sent into this country, realising from 4s. 6d. to 7s. per 120.

From the above facts it will be seen that the preponderating mass of imports does not compete with British produce, and also the nearer an egg is consumed to its natural source of output the greater its value. Freshness is of vital importance and the determining factor of its value. In the point of distance the English producer stands supreme, a supremacy which no foreign competitor can wrest from him. That we can and do compete successfully is undoubted, and therefore the British producer has nothing to fear, especially where he adopts proper methods of marketing and studies to produce the best quality of material. The potentialities of the future are more promising to-day than ever. That we can and do compete successfully I will endeavour to demonstrate in the next issue.

Preserved Yolks of Eggs.

Professor Bordas has recently made a report to the Hygienic Council of Paris with regard to the yolks of eggs imported in bulk from Eastern Europe which, whilst intended primarily for manufacturing purposes, are often used for the making of cheaper pastry and cakes. It was shown that they are frequently dangerous as human food. The Council has decided to recommend that all egg yolks which are, to say the least, at all doubtful, shall be mixed with oil of camphor, for by so doing they will be rendered useless for food consumption whilst not affected for certain manufacturing processes. This proposal has been transmitted to the Minister of the Interior and Finances, inviting him to secure the necessary measures for bringing it into effect.

Australian Frozen Poultry.

The importation of frozen poultry from Australia has for some time been carried on successfully in small quantities, and a movement is on foot to establish the trade on a large commercial scale. Inquiries made at Smithfield Market, says the *Morning Leader*, show that the scheme is regarded favourably by the large majority of poultry salesmen there, though some doubt is expressed as to whether the resources of the Australian farmers are equal to a steady and continuous demand. One firm alone has expressed its willingness to take from 200,000 to 300,000 fowls a year if the supply can be guaranteed. There is no fear of the price of English fowls being lowered in consequence of large consignments from Australia, as the demand at present largely exceeds the supply, and no ill effects have been felt by English farmers from the large imports of frozen poultry from Russia and other grain countries.



Poultry Breeding in India.

Although the great Dependency is the original *habitat* of the fowl, poultry breeding is in a very backward state in that section of the British Empire. Anglo-Indians have for many years given attention to this branch of stock breeding, but chiefly for supply of their own needs. These efforts, however praiseworthy, have been upon a limited scale. We are glad to learn that owing to the efforts of Mr. Abbott, editor of the *Indian Fowl Fanciers' Journal*, steps are being taken to deal with the question on a more progressive basis. A poultry farm has been established in the Rampore State by the Nawab, backed by Government aid, and recently Mr. Mollison, Inspector-General of Agriculture in India, invited Mr. Abbott to attend the Pusa Conference and explain what might be done. As a result the delegates at Pusa adopted a scheme which, if conducted upon practical lines should do much for the development of the industry in India. The recommendations include: (1) that the breeds indicated in the report as suitable for India should, in a practical way and on the lines suggested, be dealt with at Pusa; (2) that it is necessary to have a trained assistant for the purpose; (3) that the chief object should be to provide a means of producing general utility in India; (4) that from Pusa selected birds should be distributed for pure breeding and for crossing; and (5) that if the preliminary work at Pusa shows that poultry breeding on the above lines gives promise of becoming a remunerative industry, the work should be extended through all useful agencies in India, such as provincial agricultural stations, grass farms, European planters, Eurasians, and well-to-do Parsees and Mahomedans. We note that the breeds recommended include Plymouth Rocks, Orpingtons, Wyandottes, Geese, and Turkeys, though it might have been expected that in a hot climate the slighter bodied Leghorns for egg production would have been more suited to the country.

New Zealand Poultry Institute.

Our bright contemporary, the *New Zealand Poultry Journal*, is, in the absence of direct provision of poultry

teaching by the Colonial authorities, commencing a poultry institute, where it is intended to provide courses of instruction in poultry culture and practical lessons in the business of poultry farming; the latter, we take it, to include experimental work. If this institute is conducted on practical lines it should do much for the development of the New Zealand poultry industry, which is growing very rapidly, under conditions which are specially favourable, as must always be the case in an island.

New South Wales.

A Sydney exchange states that the first annual report of the New South Wales Poultry Breeders' Association records that a large amount of work has been accomplished by an energetic executive committee on an extremely limited income. The Association has been assured in writing by the Minister for Agriculture that in the organisation of the new Department of Agriculture anything which is likely to be beneficial to the poultry-farmer will not be overlooked. The utility of lectures on poultry-breeding and keeping generally is also affirmed to be under consideration by the Department. It is proposed that an annual poultry conference shall be held at the Hawkesbury Agricultural College, and it is anticipated that in due course, in response to the representations of the committee, the civic authorities will establish poultry markets, where all the principal poultry auctions will be held under one roof.

The Late Harold Cadell (N.S.W.).

The death is announced from Sydney of Mr. Harold Cadell, brother of the late Mr. Tom Cadell, who was well known for several years as an enthusiastic breeder and exhibitor of poultry and pigeons in England. Mr. Harold Cadell visited this country about twenty years ago, taking back with him a large stock of good birds, and he has been well known in Australia as a successful breeder of Minorcas, Plymouth Rocks, and Orpingtons.



GENERAL VIEW OF COMPETITION PENS AT ROSEWORTHY, S. AUSTRALIA.

POULTRY PRODUCTION IN SOUTH AUSTRALIA.

By MAJOR NORTON, D.S.O.

Trade Commissioner, Government of South Australia.

OWING largely to its equable climate, South Australia may be regarded as one of the countries specially suited for poultry-raising. It is not surprising therefore that the poultry industry is increasing by leaps and bounds and is likely soon to become one of the most important industries of the State. It is, however, realised by those interested in the industry that nature helps those who help themselves and that poultry, if left to themselves, even in South Australia, are a loss rather than a profit to their owner.

A few years ago the majority of the farmers to whom one spoke about poultry-raising would invariably give the same reply, "Poultry don't pay." The reasons for this opinion were that at certain periods of the year eggs realised only 3½d. per dozen and the birds themselves from 9d. to 1s. each on the Adelaide market. Owing, however, to the successful opening up of export markets the general conditions have vastly improved and the raising of poultry can be made very profitable. Even now, however, some farmers take a pessimistic view of the industry, but these men fail to recognise the necessity for care and attention in poultry-raising, or to see that if they treated their other stock in the same casual way as they do poultry the same remark would apply to all stock rearing.

I recollect when it was quite a common thing to see two or three hundred head of poultry, irrespective of breed or sex, running wild about a farm-yard; the owner had not realised that a preponderance of male birds was the reason for a loss of profits that would otherwise be made from pullets. This state of affairs

is, however, fast disappearing and the manifest improvement in methods is owing to the following reasons:—

- (1) The assistance which is given to the industry by the Government;
- (2) The influence of the many important poultry clubs organised during the past few years;
- (3) The prominence which is given to the poultry industry by the leading Press of the State; and
- (4) Properly conducted egg-laying competitions.

Recognising the value of poultry-raising on proper lines as an adjunct to farming and fruit-growing, and the possibilities of a great export trade, the Government assist the industry in every possible way except with actual monetary allowance. The policy adopted is not to assist the lazy man, but rather to help the worker to help himself. Experts in every branch of the industry are provided. Experimental farms have been established, from which farmers and others interested can obtain birds of good breeds at moderate prices and thus do away to a great extent with the old-time barn-door mongrel, which has for so long been the real obstacle to profitable poultry-raising.

The Government initiated and controls the over-sea export trade of poultry and eggs, which has been proved such a success. In fact, but for this over-sea trade the industry must have broken down under its own weight, for the ever-increasing production would have soon exhausted the demands of the markets of the Commonwealth, and prices would decline to such an extent that poultry really would not pay.

Under the Stock Diseases Act the Government made regulations regarding the introduction into the State of poultry, with the object of preventing the spread of disease. Although South Australia is by no means free from certain diseases which affect poultry, yet sickness does not exist in anything like the degree which it does in other less favoured countries. Everything possible is being done, both by inspection and instruction, to minimise the

diseases that do obtain. Inspectors have power under the Act to destroy all infected poultry and the crates or receptacles in which they are being conveyed, and also to place disease-infected houses or yards in quarantine and order immediate cleansing of the premises. The various poultry clubs foster and encourage the raising of useful breeds by organising shows and laying competitions. Some of the most important of the latter have been conducted at the Government agricultural college under the direct supervision of the chief Government expert.

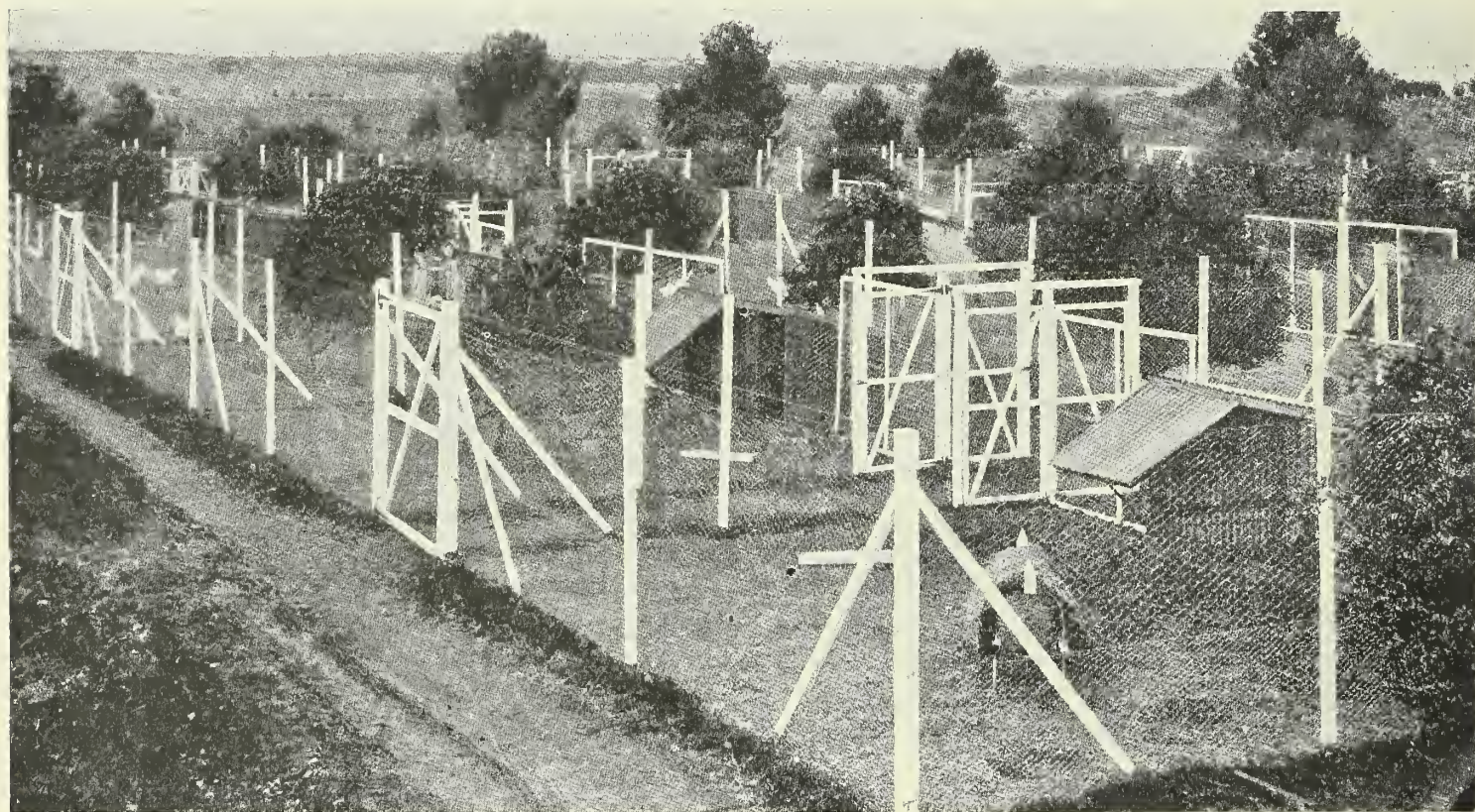
BREEDS.

Almost every known breed does well in South Australia; those of the light Mediterranean class doing better in the far north, whilst the heavier

it not been for the poultry, farmers would have gone short of the necessities of life during the bad seasons from which South Australia suffered some years ago. Fruit growers, who not long since looked upon poultry as a nuisance, have altered their views and many are now stocking poultry.

HOUSING.

This is an item which needs almost less attention in South Australia, owing to the mild climatic conditions, than any other part of the world. The houses are usually made of galvanised iron, so constructed that a maximum of fresh air can be obtained without a draught, and are painted white to lessen the temperature in summer time. Shade is provided by the judicious planting of trees and shrubs.



BREEDING YARDS. ROSEWORTHY LAYING COMPETITION.

breeds are more successful in the southern portion of the State. It is not, however, so much the breed as the strain which is regarded as of primary importance. It will be noticed, when looking through the results of laying competitions, that pullets of the breed which heads the list are also at the bottom. If I was asked, however, to name the breeds I considered to be the most popular in South Australia I should say White Leghorn, Black Orpington, and Silver Wyandotte.

POULTRY FARMS.

There are few, if any, persons in South Australia making a living out of poultry-raising alone, and I know of one instance only where the colony house system is in vogue. Poultry is looked upon as a useful addition to farming rather than as a primary industry, although I have heard of cases where, had

One of the chief reasons for constructing houses of iron is because there is less harbour for "tick" than there would be if the houses were built of wood or composition, and should an iron house become infected with "tick" the pest is eradicated with less trouble.

HATCHING.

The majority of chickens are hatched in the natural way, though there are many incubators of various makes in use throughout the State.

EGG-LAYING COMPETITIONS.

Nothing, in my opinion, has done more to stimulate the poultry industry in South Australia than the laying competitions which have taken place from time to time. These competitions create healthy rivalry amongst producers and, from an educational standpoint, are invaluable. Laying competitions have

demonstrated conclusively the wisdom of stocking only pure-bred poultry and on this subject the *Adelaide Observer* states that at the Subiaco competition a pen of pure breeds in eleven months laid 1,367 eggs, whilst a pen of nondescripts in the same time laid only 591 eggs. The same paper mentions the fact that, out of all the pens of fowls which have competed since the inauguration of laying competitions throughout Australia, only three have laid more than 1,500 eggs and the birds were in each case produced by South Australian breeders. Laying competitions have become so popular that one of the

For these reasons the practice is now advocated and in many instances adopted.

It will be seen that poultry-raising is a very live industry in South Australia, and all interested, from the Government, the breeder, and producer, to the egg merchant, the exporter, and consumer, are helping to improve its present satisfactory condition. When the full importance of producing only infertile eggs and the enormous possibilities of the export trade in eggs and poultry are recognised thoroughly by the producers, I am convinced that poultry-raising will become a very profitable industry.



A BREEDING PEN AT ROSEWORTHY.

leading South Australian authorities has stated that "to discontinue competitions would be to give the poultry industry a knock-down blow."

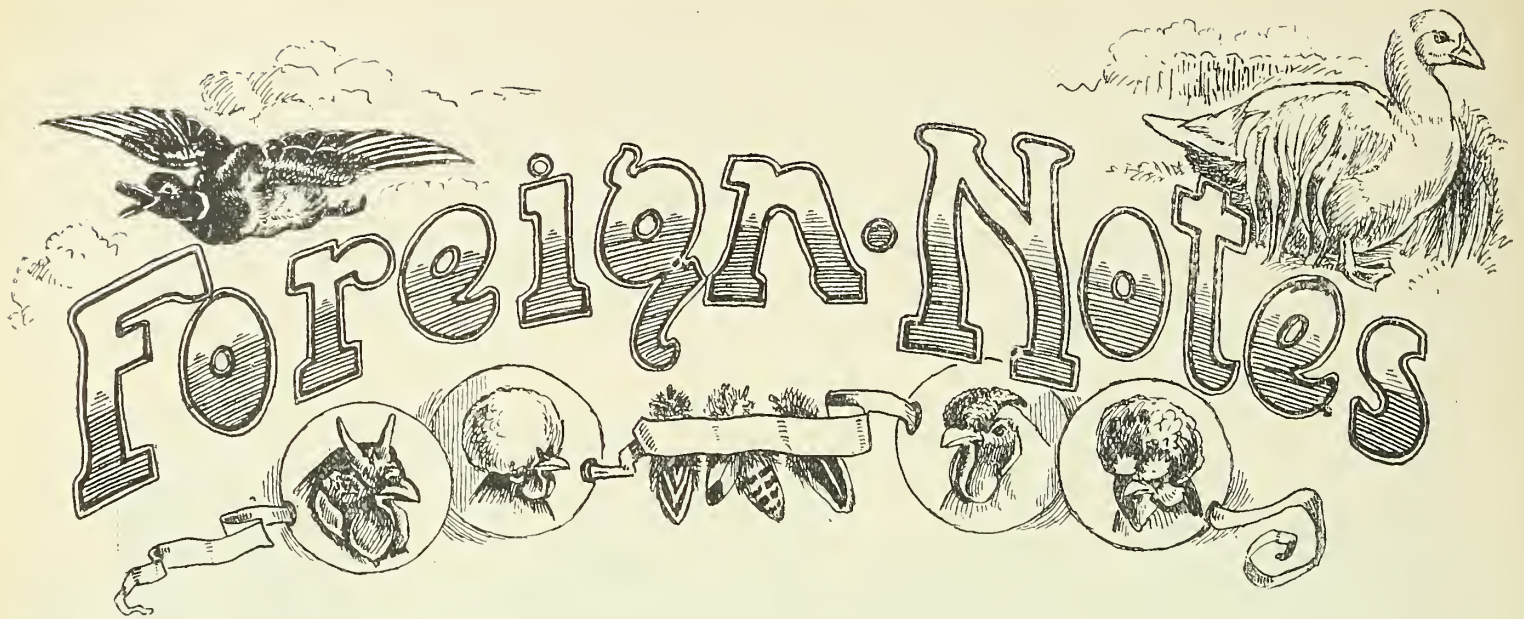
INFERTILE EGGS.

This is another feature in the poultry industry which is now receiving the serious consideration of a large number of poultry raisers in South Australia, and the old-time theory is every day being put more into practice. The following are the reasons why our experts advocate the production of infertile eggs and why the number of producers who believe in the theory is daily increasing:—

- (1) An infertile egg will keep for a much longer period than a fertile one;
- (2) Because all cockerels can be fattened as quickly as possible by separating them from the pullets, a result that is more rapidly achieved than if they are allowed to run about at will;
- (3) Pullets will lay much better if left to themselves; and
- (4) By breeding from the eggs of specially selected birds much better results will naturally be obtained than if the eggs are taken, as in the old days, promiscuously from a basket and put under the hen.

GUELPH (ONTARIO) POULTRY INSTITUTE REPORT.

THE Poultry Institute held annually at the Ontario Agricultural College, Guelph, is always an interesting and instructive gathering. Professor W. R. Graham secures the best experts obtainable across the Atlantic, and the selection of subjects is essentially practical. The report of the Third Poultry Institute, held February 10 to 12 last, has recently been published by the Ontario Department of Agriculture, Toronto, from whence it can be obtained. The subjects dealt with are "Incubation," by W. H. Day; "The Chemistry of an Egg and Chick" by Professor R. Harcourt; "The Use and Abuse of Brooders," by J. L. Nix; "Lessons of the Year" and "Strong and Weak Vitality in Poultry," by Professor J. E. Rice; "My Experience in the Production of Eggs" and "How we raise 30,000 ducks annually at a profit," by W. R. Curtiss; "Co-operation as the best means of selling Poultry Products," by W. L. Smith; "A Chalk Talk on Breed Types" and "Poultry Business in the Old World," by F. L. Sewell; and "A Demonstration in Judging," by W. McNeil. One of the features of these Institutes is the questions and answers, and this bulletin of sixty-four pages is full of valuable reading.



Comparative Values of Poultry Produce in the United States.

One of the difficulties which pioneers in the development of industrial poultry-keeping have met with is the failure to realise the comparative value of eggs and poultry production with other branches of agriculture. Professor James Dryden, speaking of the United States, says:—"During the census year (1899) the oat crop lacked seventy-four million dollars of being equal to the poultry crop; barley had a value of just one-seventh that of poultry and eggs; all the orchards of the United States produced less than one-third as much as the poultry; fruit of all kinds was worth less than one-half as much as the hen crop; and potatoes one-third as much. The sugar beet crop, which has been the beneficiary of legislation and bounties, does not begin to compare in value with the products of the poultry yards, which worry along with no subsidy but neglect; the wool clip of the United States, a frequent factor in political campaigns and of congressional debates, was worth 45,723,739 dollars in the census year, or 235,454,508 dollars less than the poultry products."

The Value of the Hen.

Professor C. E. Graham, in the course of a farewell address to the Connecticut Poultry Association, said that "the hen is to-day the greatest friend our agricultural colleges have, and yet many of the college authorities do not seem to realise it. The chicken department of a college is the one and only department where the dairyman, horticulturist, mechanic, banker, and child can meet on a common level. It is the only department in which all citizens, whether from the city or country, are interested. While I have no authority for the statement, still, I think it is a fact, that the poultry department at Storrs receives more correspondence than all other departments put together; and it is admitted, at nearly all colleges where there is a poultry department, that it is the one that everybody wants to see, whether the visitor is from the city or farm; whether

they be man or woman, old or young. The hen and her egg are depended upon to pay more grocers' bills than all other agricultural crops. We are told that poultry literature is read by more people than all other experimental literature put together; and I believe that in time there will be a greater demand in New England for poultry education than for any other two agricultural branches combined.

Preserved Foods.

In these days the question of preserved foods is of great importance. Dr. Wiley, of the United States Bureau of Chemistry, has recently had under observation twenty healthy young men, clerks in Government offices, who were fed on foods that had been chemically preserved. Many of them lost weight, and some became subject to nausea and indigestion. As a result of Dr. Wiley's report, the use of boracic acid, benzoate of soda, &c., will probably be prohibited. Fresh foods must always be better than preserved, and hence near-by producers should endeavour to meet the needs of consumers.

Poultry Conferences.

Evidently we have entered upon the era of poultry conferences, which cannot fail to do much for the advancement of the poultry industry. A proposal has been made that one shall be held in New Zealand and another in South Africa. A very important gathering took place in July last at Cornell University in connection with the New York State College of Agriculture. In *Farm Poultry* it is announced that the Governor of the State of Massachusetts is taking the initiative for the holding of a New England Poultry Conference some time after the middle of November.

White Diarrhoea in Chickens.

The prevalence of this disease in America is generally acknowledged, and the question is a very serious one to poultry breeders in that country. A large amount of attention is being paid to the subject both scientifically and practically, and the

extent of research work undertaken by the Federal and State authorities indicates that effort is being put forth to discover the cause. At one time it appeared to be almost entirely confined to brooder raised birds, but now hen brooded chicks seem to be equally affected. The mortality is enormous, in some cases as many as 95 per cent. succumb. Whilst it is essential to discover the bacillus which causes this disease, a more important question is how far the conditions under which the birds are kept and the nature of the stock contributes to its development. As pointed out by Mr. Edward Brown, in his "Report on the Poultry Industry in America," the crowding of fowls and the lack of attention to the provision of fresh soil must sooner or later induce disease of one kind or another.

Importation of Poultry into Argentina.

A law has been passed by the Argentine authorities which is of importance to exporters of poultry. It provides that "The Live Stock Department shall inspect all birds which are imported into the country, detain those which are suspected of being the vehicle of any disease, and destroy those which offer any risk of spreading any contagious disease, or which may be unfit for human consumption. Those birds arriving dead are to be destroyed, and those which have come in the same cage or which have come from the same place shall be considered as suspected until the cause of the death of the former shall have been ascertained. Birds are not allowed to enter the country without a sanitary certificate from the Live Stock Department." These regulations are very drastic, but it is claimed that a considerable amount of disease has already been introduced by imported stock.

Poultry Keeping in Brazil.

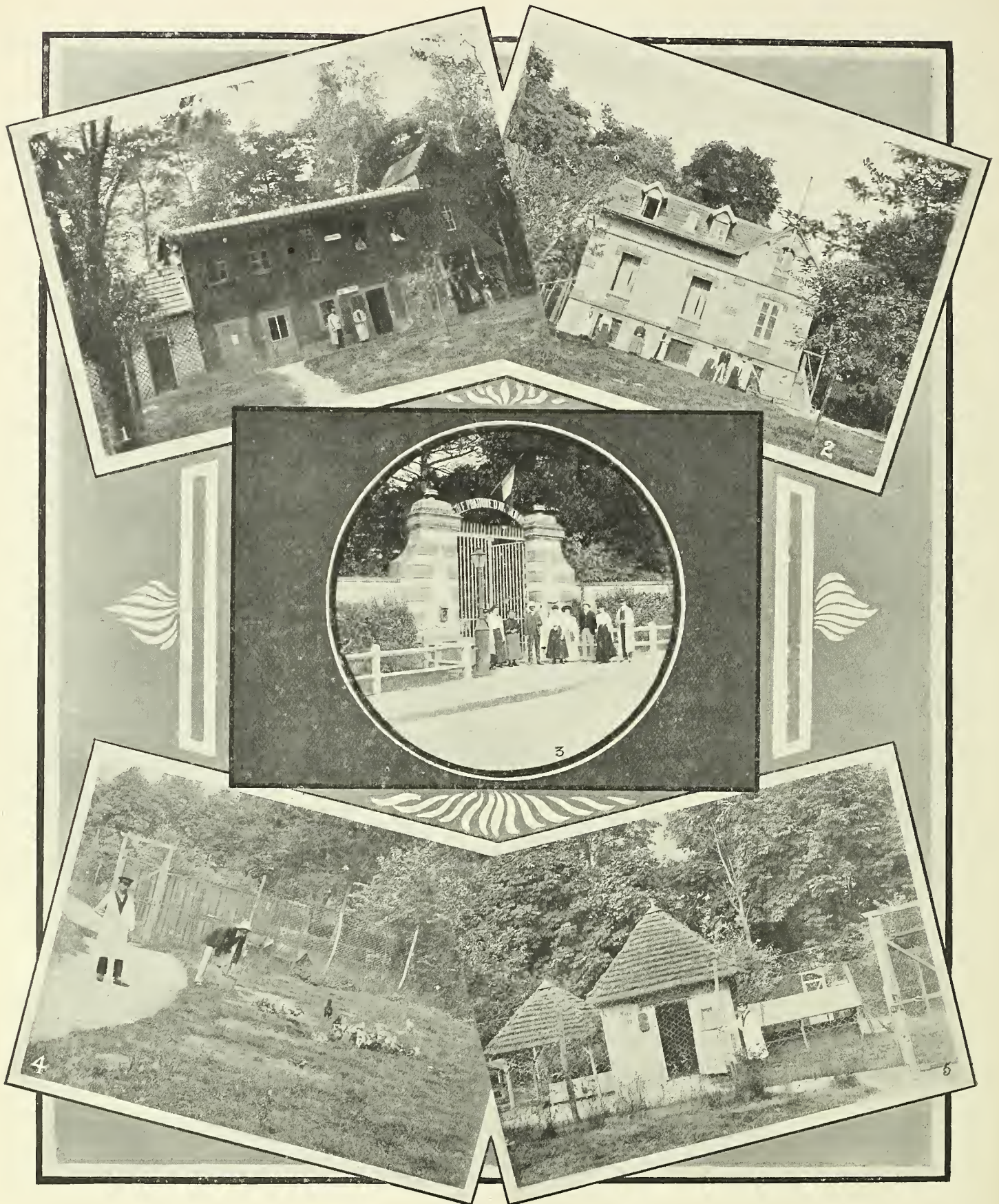
South America is a *terra incognita* so far as poultry-keeping is concerned. There are plenty of poultry there, but the quality is poor and methods followed crude in the extreme, in spite of the fact that prices for eggs and chickens are high. In a recent issue of the *Journal of the National Poultry Organisation Society*, it is stated that in the capital of Brazil, Rio de Janeiro, eggs range from 2s. to 3s. 6d. per dozen, and the small, ill-fleshed chickens sell at 2s. to 3s. each. Something has been done in the Argentine for improvement in the races of fowls, and now similar steps are being taken in Brazil. The failure of the coffee industry in the last-named country has compelled the authorities to look in other directions, among which poultry-keeping is given a recognised place. It is claimed that on the higher lands the conditions are eminently favourable to all stock, and that those sections which are served by railways can find an easy and cheap outlet for produce. Already some exports of stock birds have taken place, and breeders, as well as makers of appliances, should endeavour to cultivate what will ultimately prove an excellent market. Advertisements in THE ILLUSTRATED POULTRY RECORD will reach many of the buyers in South America.

IN THE HOUDAN COUNTRY.

THE Department of Seine-et-Oise has always been famous for its poultry, as it is from that district that supplies received upon the Paris markets are largely derived. The most important centre is the little town of Houdan, about 50 miles west of Paris, in the midst of a fruitful, highly-cultivated country, where farming is carried out on advanced lines and poultry are recognised as a valuable portion of the live stock. Within the past generation this industry has grown considerably, and around Mantes to the north and Faverolles to the south farmers know the value of fowls in the rural economy. At one time Houdans formed the breed almost universal throughout the district, but the introduction of the Faverolles about thirty years ago has changed the nature of the birds, and now the great bulk are of that breed, as they meet the demand for large-bodied fowls, fairly good in flesh qualities, easily reared, and quick in growth.

The market at Houdan is an interesting sight. Here the producers gather with their baskets of fowls and are met by the buyers who come from Paris and elsewhere. It may be mentioned that as a rule poultry breeding has not changed to any extent for a long period of time, and nothing like intensive poultry-keeping can be found. The number of birds upon each individual farm is comparatively small, but those kept are well looked after, and there can be no question that the people of the district are skilful in this work. That the country is capable of carrying a very much larger number of fowls is unquestionable, but to do that would involve a change of method. In travelling through the country we find that the system of keeping a few birds around the homestead yet prevails, and anything like either the portable or colony house systems are practically unknown; occasionally a portable house is seen, but they are very rare indeed. It is somewhat surprising that more has not been done in this way, but it cannot be denied that progress, in respect to poultry culture, has been very slow within the last thirty years.

In Houdan itself is a breeding establishment upon somewhat limited lines, where stock birds are bred and sold in the way with which we are very familiar in England. This, at one time, was conducted by M. Philippe, but is now owned by M. Semet. As is usual in these cases, there is a combination of poultry breeding and the manufacture of appliances, and here we found incubators, &c., being made. It may be mentioned, however, that the use of incubators has grown to only a very small extent in France and is almost entirely confined to specialists. The farmers of that country have never yet taken up artificial methods, and so long as their operations are upon so small a scale that will probably continue to be the case. The breeding establishment is very well arranged, beautifully laid out, and kept in almost perfect condition, but is on a small scale. The tiny runs, or "parcs" as they are called, in which a few fowls are kept are very pleasing to look at, but have not much practical value in respect to the industry as a whole. Still, places of this kind, by the dissemination of selected birds, are of considerable use.



ECOLE PRATIQUE D'AVICULTURE, GAMBAIS, FRANCE.

[Copyright.]

1. Hall of Studies and Dormitory.

4. Flock of Houdan Chickens.

3. Entrance Gates.

2. Incubator and Fattening House.

5. Rearing House and Brooder.

The most interesting place to visit near Houdan is four miles away in the village of Gambais, where is situated L'Ecole d'Aviculture, which has the credit of being the first poultry school ever established and which has had considerable influence in many directions. This school is subsidised by the French Department of Agriculture, and was formerly owned by MM. Rouillier-Arnoult, but is now conducted by MM. Poinot Frères. M. Rouillier was the inventor of the first practical incubator, which he introduced thirty years ago, and which has done so much for the development of the poultry industry in every part of the world, as it brought us back again to simplicity in operation. The machine referred to was first exhibited at the great Paris Exhibition of 1878. The manufacture of this machine has always been carried out at Gambais. When first introduced it was worked by the changing of boiling water, known as the "hydro" principle, but about twenty years ago or more *briquettes* were introduced as a means of heating, and these are still employed.

The Poultry School has been in operation twenty years and during that time a large number of pupils have been trained, amongst them a fair proportion from Britain and other countries. The ground occupied by the farm extends over about fourteen acres and is well laid out. In this case the greater part of the place is occupied by runs, which are sufficiently large in extent. Beyond are woods, and these are also utilised for both breeding stock and young birds. The *tout ensemble* of the place is very pleasing and the avenues, well sheltered by trees—many of which are fruit—make a very pretty picture.

The great feature of this school is the method of rearing, which is almost entirely artificial. At the far end of a large open space is a house which has been built within recent years. The upper part of this is used as an incubator room, and the lower part, partially underground, for fattening. The arrangement is a very doubtful one, but as the floor of the incubator room is well built it is probable that the machines are not affected by any smell from the fattening section. At another side of the square is the Hall of Studies, where the students can work, it also forming a museum. Above are the dormitories, where many of the students sleep, but others are accommodated in special buildings or, in some cases, within the village of Gambais itself.

The breeds of fowls kept are chiefly Houdans, Faverolles and Mantès; but in addition there are other races, and a certain amount of attention is paid to ducks and geese. The system of rearing is a very interesting one. As is shown in one of the photos, the rearing runs contain a large house, which is thatched, and at the side of this is a brooder, built in accordance with the Rouillier pattern. The chickens must pass through the house to get into the brooder, and *vice versa*. Hence there is a choice. As soon as they think fit they can leave the brooder and sleep in the house; and there is no question that this system is a very excellent one. Many of the brooders contain 130 young birds, and as they grow it is found that frequently they leave the brooder at a much earlier age than any breeder would think it desirable to compel them to do so.

The instruction given at the school is essentially practical, but it may be pointed out that this is more in the direction of running a special establishment on the lines here indicated than dealing with the question from a farmer's standpoint. It may, therefore, be suggested that possibly one reason why farm poultry-keeping has not grown to the extent anticipated in France is due to the fact that sufficient attention has not been paid to this side of the work. Lectures are given regularly and the students have to go through the regular course day by day. As a rule, the course extends over three months, but longer or shorter periods can be taken if desired. The illustrations here given will show the excellent arrangements of the place and its picturesque appearance.

THE LATEST FORM OF TRAP NEST.

By OUR SWEDISH CORRESPONDENT.

THE automatic trap nest problem may now be considered to have been satisfactorily solved by a Swedish inventor, Mr. J. Byman, Vintrie, Sweden. This trap nest was shown at the Provincial Agricultural Fair in Estof, Sweden, July 8-12 last, where it attracted the attention of the numerous Swedish, Danish, and German poultry-keepers and farmers—in all about 50,000—who had come to visit the fair. It may be observed that the Shavor Fair was held in Scone, the most southern province of Sweden, where the poultry industry within late years has developed to a large extent, on account of the well-organised and paying egg export trade between that part of the country and England. It will therefore be understood that an invention of this kind, offering great possibilities for a further development of the export trade, is of considerable importance, especially as the trap nest can be manufactured so cheaply—according to the inventor for about ten shillings—that no farmer belonging to a local egg association need hesitate to buy one.

With the help of the illustration we will explain how the trap nest is constructed. The hen enters through the front doors, which are opened by her own weight when standing on the step board, *a*. When she has entered, the doors are closed behind her by two steel springs and are locked by the nest, whose front—also by the weight of the hen—is raised about half an inch, thus preventing the doors from being opened by another hen before the first one has left the nest. As will be observed, there is only one entrance, *a*, to the trap nest, but two doors, *b* and *c*, through which the hen can step outside. The door *b* is for such hens which enter the nest from curiosity or for some other reason, without laying an egg; the opposite door *c* for those which have done their "duty." From this it will be understood that it is the egg that opens and closes these two doors, so that when one of them is open the other one is closed, and *vice versa*. When the hen enters, and as long as she stays in the nest without laying her egg,

the door *b* is open, through which she can step out from the nest to the other hens and wait her turn again when more disposed for business. If, on the other hand, when in the nest she lays her egg, this rolls through a hole in the middle of the nest down to a drawer, *c*, over a balance, which changes its position, unlocking the door *c* and locking the door *b*. This balance, which evidently is the secret of the invention, is hidden. When the hen leaves the nest through the door *c* and steps on the board *d* the balance resumes its first position, locking the door *c*, but unlocking the door *b*. When the hen leaves the nest the front side of this falls down, thereby unlocking the front doors, making it possible for the next hen to enter.

It was surprising to notice at the fair how the hens felt at home in the trap nest, in spite of the crowd of people who gathered around the apparatus. The hens seemed to understand what it was intended for, and did not hesitate to step in. When inclined to get out of it they would for a minute or two try all the doors till they found the right one, and no hen ever had any trouble to find her way out. The cover, *f*, is loose and may be lifted off when the inside needs to be cleaned. The idea is that the hen through the door *c* shall enter an enclosed yard, where all those birds which have laid eggs are collected and recorded. The hens may be marked with a number or, better still, with coloured rings. One hen, for instance, may have a red ring on her right foot and is recorded *rr*; another may have a red ring on her left foot and is recorded *rl*; a third one may have a black ring on the left foot and is recorded *bl*; a fourth one two black rings on the right foot and recorded *2 br*; and so on in hundreds of different combinations. After being recorded, the gate is opened and the hens allowed to join the flock outside.

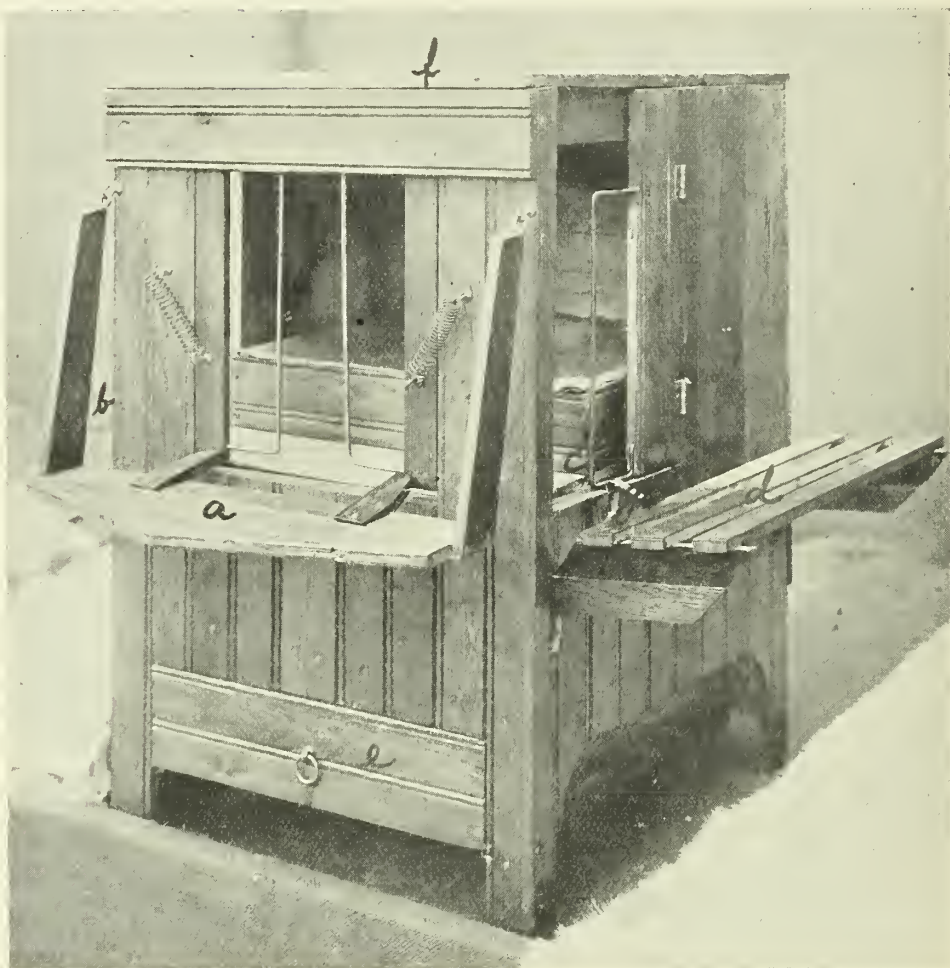
The advantages of such a simple control of the egg output are evident. By studying his record-book the owner after some time can instantly see which hens are the best egg-layers. These are kept as breeding hens, but those which have not paid for their feed are taken care of by the butcher. In this way the output in a comparatively short time might be increased many times.

The inventor, Mr. Byman, has taken out a patent for his trap nest, but has not any intention of making much profit out of it. Being one of the foremost leaders of the poultry industry in Sweden, his main object is to raise it to a higher level, not only in his own country but wherever poultry-keeping is of any importance.

SVERKER LUNDBERG.

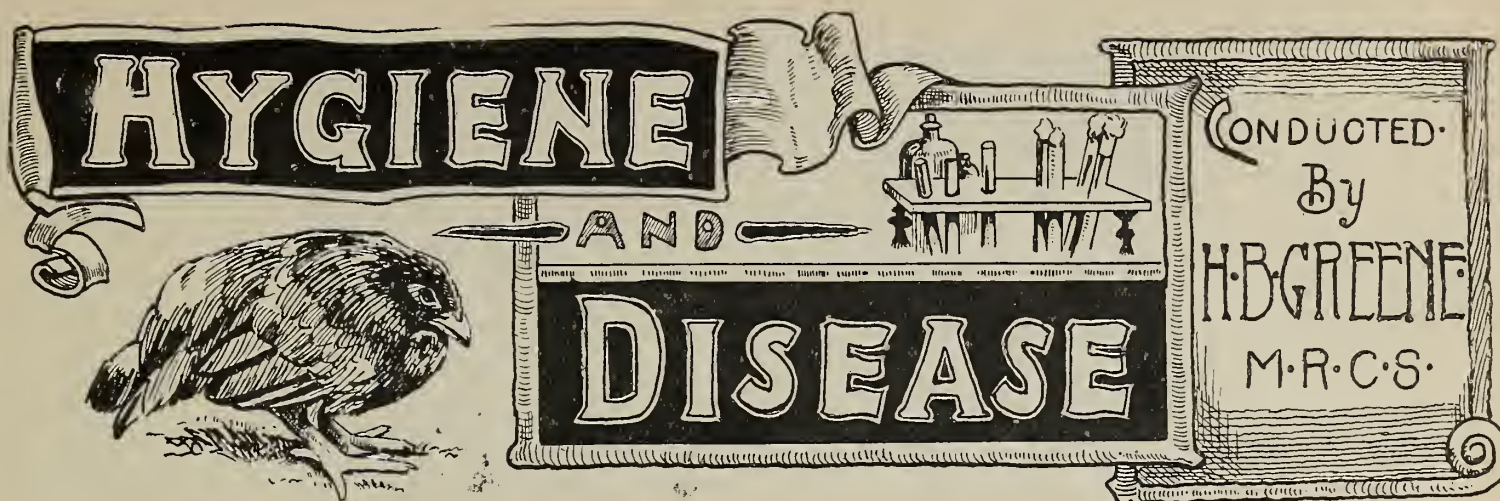
COLD STORAGE CONGRESS.

THE First International Congress of the Refrigerating Industries, which opens at the Sorbonne, Paris, on the 5th inst., is a recognition of the important place which the cold storage system is taking in connection with our food supplies. The congress is well supported by various governments and public bodies, as well as companies and firms interested in this business, and the list of subjects to be discussed is very complete. Whilst this question is not relatively of much importance to home producers



THE BYMAN TRAP NEST. (See Article.)

in any country where consumption is local, it may yet be of great value to prevent loss by sale when there is a glut. Exporting countries are wisely giving special attention to the opportunities offered by cold storage, though we have yet to learn much respecting it, and more especially the effect upon food of prolonged action of low temperatures, wherein there may be considerable danger as yet not realised. The sections which should yield the greatest amount of information to poultry-keepers are: 1. Low Temperatures and their General Effects; and 3. The Application of Refrigeration to Food. We shall look for the report of this Congress with considerable interest, and hope to give a brief account of its proceedings in our next issue.



POST-MORTEM EXAMINATIONS.

We have made arrangements by which post-mortem examinations of poultry and game can be effected for our readers upon the following conditions:

1. *The specimen is to be forwarded postage or carriage paid and securely packed to "Biologist," 297, Trinity Road, Wandsworth Common, London, S.W.*
2. *The fee of 2s. 6d. (stamps will not be accepted) must be remitted with each specimen and a letter giving particulars of feeding and housing, or any symptoms which were observed before death.*
3. *Birds should on no account be addressed to the office of the paper. If forwarded there they will be returned to the sender.*

It is recommended that specimens be despatched by parcels post where practicable and as soon after death as possible. A reply will be received by letter, defining the disease, its cause, treatment, and prevention.

help to banish parasites and also provide the mineral salts needed for the new feathers.

Polluted Drinking Water.

There is no detail connected with poultry keeping which requires more constant and scrupulous attention than that which concerns the supply of water. It must be derived from a pure source and not be too hard in character, since a chalky water is responsible for many losses in chicken rearing. Drinking vessels should be frequently scalded out and be preferably of material capable of withstanding boiling water, other than which there is no cheaper or more simple germicide. It is, of course, difficult to prevent fowls from drinking the manure-polluted puddles of the farmyard, but they are much less likely to do so if fresh clean water is always within their reach.

HYGIENE AND DISEASE.

HYGIENE and Disease! It is possible that to some the title of this section of THE ILLUSTRATED POULTRY RECORD may appear ambitious or even pretentious. What, it may possibly be asked, are the claims of hygiene and disease as touching the fowl yard that entitle them to a special section all to themselves?

Our answer to the question is, that in deciding to give space and prominence each month to articles and contributions that will help our readers to maintain health among their poultry and enable them to recognise, combat, or otherwise deal appropriately with disease, we are actuated by the conviction that ignorance of these things is responsible for more failures in poultry ventures than all the other factors, such as high freights, dear foods, and bad markets, against one or all of which the industry is from time to time called upon to contend. For of poultry farming, as, indeed, of the farming of all kinds of domesticated live stock, it may truly be said that as health is to disease so is profit to loss.

Moulting Fowls.

The period of the moult is attended by dangers to the health of poultry which are, as a rule, neither sufficiently realised nor guarded against, for the rapid shedding and comparatively slow renewal of the feathers renders them peculiarly liable to catarrhal and lung diseases. Dry, warm roosting quarters and shelter from cold winds will reduce these risks. But that is not enough. The successful manufacture of a new outfit of feathers, composed as they almost entirely are of nitrogen and mineral salts, means that the blood must be richly supplied with those elements. Moulting time should therefore mark a change in the description of food allowed and some reduction in the quantity, especially as regards the starchy and fat elements. The varieties to be commended are oats, wheat, dari, clover, cabbages, and lettuces. The morning mash of middlings may, for fowls in confined runs, include a little peameal, lean meat scraps or sunflower seed. The latter additions are not so necessary for birds fortunate in the possession of a free range, for Nature provides at this season a superabundance of insects whose destruction will benefit both stock and land alike. Foods to be avoided during the moult are barley, maize, rice, and hempseed. A dust bath of wood ashes, in which a handful of powdered sulphur has been mixed, will

The poultryman may be thoroughly well up in rearing and feeding, the farm may have been laid out with the most scrupulous attention to modern requirements, the capital ample, and the markets good and handy. With ideal surroundings all goes well with the poultry until perhaps, through the agency of

a freshly manured field or accidental access to stagnant and polluted water, the microbe of Klein's Enteritis, or the germ of chicken cholera, gets to work. A strange and unfamiliar disease appears and sweeps off its victims, not as single spies but in whole battalions. Before it the owner is helpless, and if he is one of the old peppercorn school he will probably administer some aromatic poultry spice all round, change his corn merchant, and pray that Providence may stay the rot. But Providence does nothing of the kind and the mortality goes merrily on until, it may be, two-thirds of the total number of birds on the farm have been lost, and then perhaps he meets someone who gives him the advice, as ludicrous as it is mischievous, "to kill off the lot and begin again, for it is no use to doctor sick fowls." We often wonder what a breeder of racehorses or a cattle farmer would say were he tendered the like advice, simply because some of his animals were affected with epidemic disease? But our unfortunate poultry farmer, depressed by the magnitude of the disaster, needs little urging to carry out the first part of the advice. He declines, however, to try again, and henceforth is never tired of pouring into the ears of all and sundry that poultry cannot possibly be made to pay.

On the other hand, to him who has made himself acquainted with the possible diseases of poultry, the advent of an epidemic will present no great terrors. He will recognise early that he is face to face with a contagious ailment, and that the most effective weapon against such is, above all, isolation of the sick. The fact may not be brought home to him until after two or three fowls have died, but a post-mortem examination of one of the first victims, made by someone competent to do so, will provide timely information of the nature and cause of the disease, and indicate from which quarter and with what weapons it should be attacked. To carry out the line of treatment decided upon with the requisite amount of thoroughness may inflict upon the owner no small inconvenience, since tainted runs, infected fowl-houses and polluted land, besides the stock, often call for irksome attention; nevertheless he will find reward and solace in reckoning up in tens, or even units, a mortality which otherwise would have run into hundreds.

By far the greater majority of the diseases of poultry can and most assuredly should be successfully dealt with on the same principles as would be applied in the case of other and, relatively speaking, more valuable farm stock; at the same time, it must not be forgotten that in certain instances it is alike more profitable and humane to destroy the sufferer rather than attempt to prolong life under conditions of pain, or which would, in the event of recovery, result in permanent discomfort. To temporise with a severe mutilation or broken bone is, as a rule, to waste time; while a tuberculous fowl, or one in an advanced stage of diphtheritic roup, should be speedily destroyed and cremated. Indeed, in the case of roup the mere handling of the infected bird by anyone who has also the care of healthy stock is often the means by which they become subsequently infected.

To how great an extent poultry share with man many of the diseases which had hitherto been supposed to belong exclusively to him has only of

late years been fully appreciated. That they, like him, should be subject to the commoner catarrhal affections of the respiratory tract, to bronchitis, pleurisy and pneumonia, is not surprising, for it was scarcely to be expected that he would make more careful provision for his domesticated animals in the matter of pure air, ventilation, and equable temperature, than his far from perfect civilisation has for so long permitted him to think is sufficient for his own needs.

It is specially in reference to diseases of bacterial origin that recent research has been collecting the most astonishing evidence of the similarity in some cases and the absolute identity in others of certain poultry and human diseases. If, as is held by some authorities, what is known in the fowl-yard as "diphtheritic roup" is identical with human "diphtheria" and the work of the same bacillus, then an outbreak of diphtheritic roup may involve serious consequences not only to the poultry but to the community in general. So also if the bacillus of Avian tuberculosis, which differs to no great degree in appearance from its cousins of the Bovine and Human type, is capable of becoming established in the human system and of changing its type and character in the new environment in the way that the Royal Commission on Tuberculosis has proved the human bacillus to have done after inoculation through a series of calves, then the present prevalence of this disease in poultry is, to say the least, very disquieting.

And it would not be unreasonable to assume that such epidemic scourges as fowl cholera, contagious enteritis of birds, and the disease well known in America, but fortunately not so familiar to British fanciers, termed "Blackhead," may each have some definite relation to a kindred but modified variety of the same microbe at work in the human system, only awaiting identification by the pathologist.

Again, in the domain of human skin diseases, it is becoming more evident that birds as well as mammals divide with man the doubtful privilege of entertaining the microbes, parasites, or fungi which are responsible for some of these unpleasant manifestations. For instance, the mould fungus which attacks the head and comb, giving rise to the disease known as "favus," has its counterpart in human dermatology; and the highly contagious warts found at times on the head, wattles, and neck of fowls and turkeys are none other than the local signs of the skin affection "molluscum contagiosum," the contagion of which is, without doubt, intercommunicable mutually between birds and man.

It would be difficult to estimate what sum is annually lost to the poultry industry of Great Britain and Ireland through the agency of disease, but it is certain that more than half the mortality might be prevented, and that can only be accomplished by a wider diffusion of such knowledge of poultry hygiene and diseases as is available. Well, we intend to help to do so, and in our endeavour to place before our readers, from time to time, articles of practical interest contributed by those who have specially studied the subjects, we are confident they will receive that measure of appreciation which topics so intimately bound up with the success of poultry keeping deserve.



THE ORIGINAL ORPINGTONS.

A VISIT TO ST. MARY CRAY.

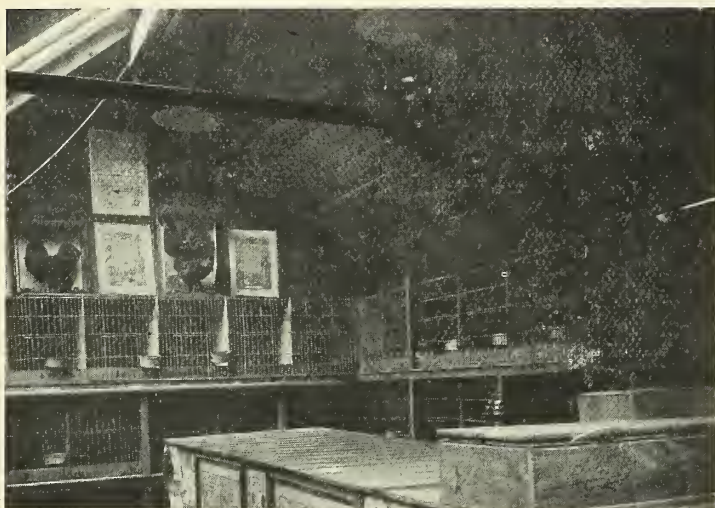
THROUGHOUT the home counties there is probably no better-known firm of poultry rearers than that of Messrs. William Cook and Sons—the originators of the Orpington fowls and ducks—Orpington House, St. Mary Cray, the present proprietors of this historic firm being Mrs. E. J. Clarke and Mr. A. Lockley Cook. Recently the rapid growth of their business necessitated their taking over additional land in the St. Mary Cray district, and about eighteen months ago a suitable site with gravel and light loam soil was secured in Newburn Farm, Cudham, six miles distant. At Mr. Cook's invitation we paid a visit to these new premises, and were most favourably impressed both by their ideal spaciousness and by the way in which they have been laid out. It is difficult to give an adequate idea of the size of Newburn Farm, compared with that of the vast majority of English farms devoted to poultry production. The bare statement that it consists of upwards of 140 acres does not convey very much to the average mind. Neither do photographs truly represent the extent of the ground. Photography, it is true, is generous in rendering distance, but it is also indiscriminating; a one-acre field, pictured by the camera, often assumes the same imposing dimensions as one of ten or twenty acres. Thus, while a photograph can represent fairly justly the absolute extent of Newburn Farm, it can give but little suggestion of the comparative extent. The impression one gets of the place is less that of a farm than of a small county. There is so much variety in the configuration of the land and the character of the soil that one finds oneself wondering whether it is really all enclosed within one boundary. So many charming vistas of wooded valley and bold escarp-

ments of hill, all within Messrs. W. Cook and Son's territory, confront one when standing on the higher ground, that the physical aspect of the estate is that of a kingdom in miniature. Yet, vast as the farm is, there is not a quarter acre upon it that has not been attended to and made to serve some useful purpose. Water is laid on to every field; and to show that no labour has been spared in the making of the establishment, we may mention that the water had to be brought one and a half miles.

Before going further we may briefly describe some of the features represented in our illustrations. Take first the runs shown in our first and second. Each of these measures 90 ft. by 45 ft. The houses are a new type. Built facing the path, so as to reduce labour, they are 28 ft. long and 6 ft. wide, with a height of 5 ft. 9 in. in front and 4 ft. 9 in. at back. They are divided in the middle into two houses, each with roosting and scratching shed, and each accommodates a cock and nine pullets. Egg registers are kept in every one. The enclosing fence consists of a uniform height of 3 ft. of felt on battens, with 2 ft. of wire netting on the top, and it is worthy of note that the whole work of construction has been carried out by Mr. Cook's own staff of carpenters. Inch-matching is used for the houses, and great attention has been paid to securing the maximum of ventilation. The largest field on the farm is shown in photograph No. 3. Here there are 22 pens of $\frac{1}{2}$ acre each, containing 50 birds apiece; the houses, admirably constructed, are all on runners. In addition to the 140 acres of which the farm, strictly speaking, consists, the birds have the run of hundreds of other acres of copse and poor land. The field in the valley, as shown in photograph No. 4, is stocked with about

400 buff Orpingtons which, one may note, are practically self-supporting. They receive about 1 oz. of food per day only, and this economy forms a valuable set-off to the heavy expenditure involved by the feeding in other sections. The property also includes a large orchard and a field with a roadway round it for foster mothers. Sheep, cattle and pigs are kept, and part of the arable land is utilised for mangel-wurzel and cabbage.

Feeding takes place at 6 a.m., 12 p.m., and 4.30. Steamed cooked food is largely used; the dry system of feeding chickens finds no favour at Newburn. The food is cooked in the evening, left to steam overnight, and is ready for use in the early morning. Feeding is accomplished with a horse and cart, which obtains access to each run through a gate 8 ft. in width. Prior to the morning meal, an inspection of the entire farm is made by a couple of men, for foxes are plentiful in this neighbourhood and their movements have



EXHIBITION HOUSE, WITH ACCOMMODATION
FOR 200 BIRDS.

to be carefully watched. In the summer the round is made at 4 a.m., and in winter at daylight. Foxes seldom raid a place in the daytime, so that the danger from them is practically over by the time the round is finished.

The present stock here and at Orpington House consists of 14,000 birds of all kinds, and these figures include 180 American bronze turkeys, occupying three pens of an acre each. All the Orpingtons are kept, the buff and the white being perhaps in the greatest demand. The other breeds consist principally of black Minorcas, white, partridge and golden and silver Wyandottes, Houdans, Langshans, white, black and brown Leghorns, silver-grey and dark Dorkings; and it is expected next year to raise 20,000 birds on Newburn Farm alone. One should add, in this connection, that the birds raised here are only for stock, and that no eggs or

chickens for table are sold either from here or from the home farm. We mention this because eggs and birds for the household are about the only poultry items that Mr. Cook and his partner do not supply. Their special feature is utility poultry—one should note, by the way, that the utility and exhibition branches of their business are rigorously kept separate and are attended to by entirely different sets of men—and there is practically nothing that the poultry farmer who is beginning cannot obtain from this source. His farm can be stocked for him, and his pens and houses constructed for him, at an inclusive charge, and he can obtain herefrom his supply of foods and medicines.

Newburn Farm has been going just seventeen months, and its success is easily assured. This result is partly due to the personal supervision of the business by Mr. Cook, who handles every bird that is sent away and attends to all correspondence, and partly to the energy of Mr. Thomasson, his manager, who came to him with the experience of a large poultry farm in Essex at his back and lives on the place itself. The cardinal principle observed by the management is that the birds should live under absolutely natural, and so absolutely healthy, conditions. To this end the perfect water supply was obtained at enormous cost, far more than ordinary attention was paid to the problem of ventilation, and every appliance was of the best quality procurable. It is, perhaps, the perfect condition of all the appliances—a condition that is too often sadly to seek—that emphasises as much as anything the individuality of Newburn Farm. It is not a show place in the sense that Orpington House, historical in more ways than one, is a show place. But everything on it is first-class in the modest way that commends itself to all who are interested in the prosperity and development of the industry.

Newburn Farm lies six miles from the home farm at Orpington House, but the distance is easily and quickly covered by Mr. Cook in his motor-car; and daily communication between the two enables the business of both to be conducted conjointly.

The famous Orpington House, the home of the Orpingtons, still remains the headquarters of the enormous business of which it was the *fons et origo*. There is no selling transacted at Newburn Farm; every bird for sale is transferred thence to Orpington House. The latter, therefore, retains its position of premier importance; and though much has already been said and written of the place, we may take the opportunity of recalling a few of its more essential features. After the openness—one might even say the comparative bareness—of the Newburn establishment, the beautifully wooded character of the home farm is one of the first points that strike one; and it is interesting to remember that its far-seeing founder



RUNS AND HOUSES, NEWBURN FARM.



NEW TYPE OF HOUSE AT NEWBURN FARM.



THE LARGE FIELD, NEWBURN FARM.



ORPINGTON HOUSE FARM—YOUNG STOCK AT LIBERTY.



NEWBURN FARM—ON THE STUBBLE.



NEWBURN FARM—A BIRD'S EYE VIEW
OF HOUSES.

was as much responsible for the presence of these sheltering trees as he was for the runs, houses, and birds that benefit from their shade. Originally there were no, or at any rate very few, trees on the Orpington estate. Those which now cover it were planted when Mr. William Cook, fully realising the importance of ample shade to the health of the birds, took possession twenty-two years ago. Apart from the growth of the trees, not a great deal has changed since that time. The majority of the pens, for instance, are those which were put up originally. In one important detail, however, the old order is just now giving place to the new and more scientific one. The incubator house at present in use, though an excellent one in its way, is a wooden

order to secure perfection in the colour of the plumage. Game birds are kept at Orpington House, though the firm does not specialise in them; they are there mainly in accordance with the determination, steadfastly adhered to, to be able to supply every variety of stock that may reasonably be asked for.

We were able to procure a few fresh pictures of the place. They include one of the exhibition room and one of the stuffed original Orpingtons which adorn this apartment; and it may not be amiss to remind the reader that the firm of William Cook and Sons has obtained no fewer than 8,500 prizes, and that this room contains diplomas from all parts of the world. Another photograph shows the pens and houses ranged along one side of a capacious tree-girt



BREEDING PENS, ORPINGTON HOUSE.

structure, and, wood being a rapid conductor of heat and cold, is therefore liable to marked changes in temperature. Since an even temperature is now recognised as a *sine qua non* for an incubator house, the proprietors intend to discard the present building and to use a brick one which is now in process of erection. In this connection one may add that at the two farms there are sixty incubators altogether.

The arrangements for show birds at Orpington House may be mentioned. There is one run to every three houses, and in each house a single bird is kept. Each bird comes out for a part of every day. *A propos* of what we have said of the ample shade provided, the reader may be reminded how important this factor is in the case of show birds in

meadow, and yet another gives a general view of the same meadow with a group of birds at liberty. Orpington House Farm is open to all, who are really interested in poultry, to see; and both this and the other establishment must be seen to be duly appreciated in regard to area and organisation. Their proximity to London renders them peculiarly accessible, and Mr. Cook's hospitality is boundless—though, after some years' painful experience of the casual, other-people's-time-wasting tripper, whose footsteps are directed by the merest curiosity, he naturally prefers the visitor to come "on business."

Visitors are met at St. Mary Cray Station by appointment.

CLUBS AND SOCIETIES.

THE POULTRY CLUB.

At the last meeting of the Council of the Poultry Club, held at the London Chamber of Commerce on September 11, the final report of the Redistribution Scheme was presented by Mr. W. W. Broomhead, the hon. secretary of the sub-committee which was appointed to place the scheme on a tangible basis. The report, which covers a period of three years, is a most exhaustive one and contains much interesting and instructive reading. Moreover it is apparent from its perusal that the scheme has been a great success, since the expectations of its promoters have been more than realised. It is stated that up to July 31, 1908, members in the following counties and sections had elected their committees:—Cambridge, Chester, Cornwall, Derby, Devon, Essex, Gloucester, Hants, Kent, Lancaster, Lincoln, Middlesex, Norfolk, Nottingham, Salop, Suffolk, Surrey, Sussex, Warwick, Worcester, North Wales (Anglesey, Carnarvon, Denbigh, Flint, Merioneth, Montgomery), and Scotland (Aberdeen, Banff, and Kincardine); while branches in eight other English counties, viz., Bedford, Berks, Durham, Leicester, Northampton, Somerset, Stafford, and Wilts, and the southern section of Wales are in course of formation, hon. secretaries *pro tem.* having been appointed. On the other hand, owing to paucity of membership, it appears to be almost futile

endeavouring to induce anyone to carry out the scheme in Buckinghamshire, Cumberland, Dorsetshire, Herefordshire, Huntingdon, Northumberland, Oxfordshire, Rutland, and Westmorland. One also learns from the report that since the new rules have been in force the total number of members elected (in 1907 and up to and including the July, 1908, meeting of the Council) is 683. And although it is acknowledged that some have doubtless joined the club irrespective of the Redistribution Scheme, there cannot be the slightest question that the vast majority were induced to become members by the various hon. secretaries of the county and section branches.

THE UTILITY POULTRY CLUB.

The following were elected Members of the Club:—A. Martin-Bruton, H. E. Jenkins, Mrs. Wiggett, T. H. Moon, Dr. F. R. Farmer, C. T. Price, J. A. Baker, H. Chown, A. Tong, N. G. Mackilligiss, Campbell Dauncey, A. C. Bullmore, Addison Wilmurt, Cyril Roberts, H. Wallis, T. Hedges, L. B. Atkinson, W. H. Watts, Jr., F. G. Walker, Wilfrid Sadler, F. Fowkes, H. Giles, A. Russell, J. Vavasseur, C.B., G. Porteous, R. Graham, L. I. Horniman, Ernest Wilkins.

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NOTES FROM CORRESPONDENTS.

NOTES FROM YORKSHIRE.

By F. W. PARTON.

The Yorkshire Agricultural Show.

For the first time since 1865 poultry classes were included at the Yorkshire Agricultural Show held last month at Halifax. The first meeting of this society took place at York in 1838, and within two years poultry had been included in the list of exhibits. In 1841, however, owing to lack of support, the poultry classes were excluded, but they were started again in 1845, and continued without break for twenty years. While the quality of the exhibits at last month's show was eminently satisfactory, the quantity left a good deal to be desired, as there were only 360 entries, notwithstanding the fact that the society offered prizes to the value of £245 15s. Halifax, with its population of over 100,000, might have contributed more generously to this section, and the same thing applies to many other large and well-populated cities in close proximity. We are glad to observe that the society evidently intends to encourage the utilitarian as well as the fancier, as the former class was excellently catered for. It is to be hoped that the council of the society will not be disheartened by the comparatively modest display. As already indicated, although the entries were few, the quality of the birds was extremely good, and especially does this apply to Dorkings and White Wyandottes. Special attention should be drawn to the wonderful display of Bantams which were well represented and formed, as a whole, probably one of the finest displays ever seen in this country. There were several circumstances that militated against the classes being better filled. The most disastrous was that the Royal Lancashire and the Yorkshire Shows were held in the same week, only one clear day intervening between the two meetings. Another matter which undoubtedly had a great influence upon the number of exhibits was that sufficient publicity had not been given to the fact that poultry was included in the prize list. This, however, is a matter which no doubt will be overcome before the next fixture, and we may reasonably hope to see the Yorkshire Show on a level with the best in the country so far as the poultry section is concerned.

The Young Stock.

The past season has been an extremely satisfactory one to Yorkshire poultry keepers generally; in fact I do not remember for many years seeing more healthy and vigorous stock. Particularly is this the case so far as some of the general purpose breeds are concerned. The lighter varieties seem to be but little influenced by their surroundings, but a fine, dry summer makes a marvellous difference to the heavier and somewhat lethargic breeds. The Yorkshireman seems to be at last realising the vast importance of winter eggs, and every season sees an increase in the number of general purpose fowls, particularly the Wyandotte and the Buff Orpington.

The cold winter and heavy rainfall that were experienced during the spring rendered the rearing of early birds rather more difficult than usual, and in one or two districts the percentage of mortality ranged high. The warm summer, however, quickly made amends for the unfavourable spring, and young stock of all classes of poultry made rapid headway. So quickly did the pullets mature during July and August that in many cases they commenced laying rather too soon; this must be avoided, as if the pullets begin laying before the middle or end of the present month, they will probably cease immediately the cold weather approaches. Pullets that are too early can be retarded for several weeks by feeding upon a very low diet.

SUSSEX NOTES.

By S. C. SHARPE.

Local Shows.

We sometimes hear poultry keepers grumble because they consider there are too many poultry shows held. In my opinion, the small local show held in conjunction with the annual flower show in the country village does a lot of good. It encourages the small poultry keeper; it gives him a chance of competing where he may show his produce and compare it with others. He would never be able to enter poultry or eggs at a large show for many reasons—he may be a long distance from a station and therefore is handicapped in the carriage of his goods; or he feels that he cannot afford to pay an entry fee of 3s. 6d. to 6s.; therefore, although he may have some good birds and eggs, he would never have a chance of competing, but he will make several entries at a local show, and although the prize money is not high it gives a deal of satisfaction to know a prize has been taken.

I have had the pleasure of judging a number of these small shows and it is very gratifying to notice how, each year, in some of the country places, the exhibitors improve in their exhibits. I have seen quite recently some very fine birds—young stuff that has been reared this season, also eggs of splendid colour and size. Only a week or so back I judged a sample of eggs at Shermaubury, near Henfield—the brownest eggs I have ever seen; they would have taken a prize in any large show.

Let every district try to arrange its little poultry section and give the small breeder a chance.

Turkeys in Sussex.

There are not many reared in the county, although I think a few more are kept on some of the farms than formerly. I saw a flock of 120 a few days since of the American Bronze—fine birds, doing well. There is a profit in turkey breeding if one has the time and, what perhaps is most important of all, the range for the young birds. It is hopeless to think of rearing turkeys on the same piece of land each

year; they must have fresh ground and plenty of range. Provided this is obtainable it is not a difficult thing to rear a hundred or so of birds, and when well fed with plenty of good ground oats and barley meal they will be worth a nice sum at Christmas. I notice where turkeys *are* reared in this county they are generally very well looked after, the plan being to feed pretty well from the time of hatching. They are generally hatched by the common hen and reared by her in a coop. This is a good plan, as one will then get a larger number of eggs from the stock turkeys than when they are allowed to sit. Some farmers like to let the turkey hen bring up one brood during the season, and when this is done she should have the last batch of eggs. Turkeys make capital mothers and brood their young well. They are also very handy for rearing chickens, taking large broods. Some of the Sussex fatteners buy up a batch or two of young birds in October or November, and about three or four weeks before Christmas shut them up in a shed, cramming them by machine twice a day. A lot of extra weight can be quickly added in this way, and when the birds are properly finished off they are among the finest that are put upon the market; the cramming or fattening process seems to whiten and soften the flesh.

NOTES FROM WALES.

By A. T. JOHNSON.

All poultry keepers in the Principality are congratulating themselves upon having had one of the most successful seasons ever experienced. Although there were some cold spells in the early part of the year the weather, on the whole, has been remarkably good. A low temperature when the birds were in the breeding pens was the exception rather than the rule and a normal spring was followed by a memorable summer. Epidemics such as gapes and chicken cholera have been conspicuously absent; even enteritis and tuberculosis among the farmers' poultry seem to have, for the time being at any rate, abated, and while the fanciers are enjoying the satisfaction of having good flocks to handle and "sort out," the utilitarians for the most part report that the demand for produce has never been brisker. The record invasion of summer crowds to the seaside resorts sent prices up at a bound and the local supplies were quite inadequate to deal with the requirements. Thus every year the same thought strikes us. What a pity it is that those who pretend to cater for this holiday traffic do not "gird up their loins" and prepare themselves for what might be to them a golden harvest, instead of waiting until the time comes and then deploring their want of foresight. There is no country in the world better suited for poultry-keeping than Wales. With its mild climate and well-drained slopes broken up into the smallest of fields, its abundance of dry, scrubby land and excellent summer market (which, by the way, is the most profitable market of all so long as prices are fairly good—and they are), it stands almost without a rival in the eyes of all practical poultry keepers.

The Rev. E. Lewis Jones, of Heyope Rectory, Knighton, Radnor, reports having had a most successful season. To his fine stock of Campines (in which he is pre-eminent as a breeder and exhibitor) he has just added Black Wyandottes, White Orpingtons, and Black Sumatra Game. If Mr. Jones succeeds as well with these as he has done with Campines exhibitors will have a formidable rival in the field. Not only is he the highly esteemed rector of Heyope, which takes up much of his time, but he is hon. secretary of the Campine Club and the South Wales branch of the Poultry Club, and an active committee man of many specialist clubs and shows.

IRISH NEWS.

By MISS MURPHY.

The many old pupils of the Munster Institute have heard with regret of the retirement of Mr., Mrs., and Miss Smyth from the important positions they held in this, the foremost agricultural college for women in Ireland. Taking a keen interest in all matters connected with agricultural education, Mr. Smyth guided the destinies of the school through many stages for over a quarter of a century and no official ever left the Department of Agriculture who was more sincerely and deservedly regretted, although he had been in their service for little more than six years. The itinerant instructors in poultry-keeping who graduated at Cork, and are now so widely scattered, will join with us in wishing Mr., Mrs., and Miss Smyth long and happy days in their pretty home at Iona Road, Drumcondra, Dublin.

Best wishes to Mr. and Mrs. Eccles of Athy. As Miss E. S. Mahaffy, Mrs. Eccles was a teacher of poultry-keeping and dairying and conducted classes in the latter subject in Kilkenny for three years previous to her marriage last August.

Miss N. J. Hickey has completed her first year's work as Lecturer to the South Tipperary Committee of Agriculture. She devotes a good deal of her time in making house-to-house visits, which, although infinitely more laborious, are in her opinion far more effective than lectures. Where possible, classes are held at which young girls attend two hours daily for a fortnight to learn the A B C of profitable poultry culture; fattening, killing, plucking, and marketing are taught where suitable birds can be found. Miss Hickey is very much in favour of an increase in the number of table birds kept in the county. A native of the premier chicken-rearing county in Ireland, viz., Wexford, she hopes by dint of hard work to see Tipperary one day "trying titles" with it, to use a southern expression.

Light Sussex are becoming wonderfully popular in the south-west and appear to suit the soil admirably. We saw a remarkably fine flock on a farm in Limerick and were informed that at the date of our visit (last month) several of the pullets had begun to lay, although the first batch did not hatch out until March.

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